

taaacacgaa gcggaaaaaa gatttgaaca tcttcaaadc ttatatggtg gagaattgta 60
 ctatacaagt gatatgtag aaaaactgaa gttaaagcaa attccaactt taaacaatac 120
 gaaatttgct ttaattgaat tttctatgca aacttcttgg aaagatatc atacagcttt 180
 gtcaaagtgt ttaatgcttg gtattacacc agtcggttgcg catatagaga ggtataacgc 240
 tttagagaat caaaaagaac ggggtgaagga aattattaat atggggtgtt acacacaaat 300
 aaatagttcc catattttga aacaaaaact ttttaatgat aagcataaac gctttaagaa 360
 aagagcccggt ttttttttag aggaaaattt agtgcatttt gtagcgagtg atatgcataa 420
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 taaagaacgt gctaaccaac tttttattga 510

<210> 608
 <211> 534
 <212> DNA
 <213> Streptococcus agalactiae

<400> 608
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 atagtattac tgcacaagat ctacaagcgg ggagttttct tgcaaatgac tataaggaga 180
 ttattacgtc tactgacggt ctagaaaaag ttatttcttc tgaaaaattg aattatcctt 240
 cgtctcagtt gctacaaaaa ataacagttt ctattttaa agatacacgt gttatttcaa 300
 tatcggtcga agatgctaact ccaaaaatgt ctcaaaaatt agcaaattca gttagagaag 360
 cagcagtttc aaaaatcaag gcagttactc aagtagaaga tatcactact cttgagaagg 420
 gaaatttacc taaagcacca tcttctccta atattaataa gaatgtacta atcgggttta 480
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<210> 609
 <211> 585
 <212> DNA
 <213> Streptococcus agalactiae

<400> 609
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 gaaggggaag gaaaatccac tacttcaaca agtttagctt tatcttttagc tcaagcagga 120
 tttaaaacat tattaattga tgcggatact aggaactctg ttatgtctgg aacctttaa 180

gcaactggaa ctattaaagg cttgacgaat tatttatcag gtaatgcaga tcttgagat 240
 attatctgtg aaaccaatgt tcctagactg atggtcgttc cttcagggaa agtaccacca 300
 aatccaacag cattacttca gaacgcttat ttttaataaga tgattgaagc tattaataaat 360
 atatcttgatt atattatcat cgatactcca cctattgggt tagttgttga tgccgcaata 420
 atcgctagtg cttgtgatgg ctttgtttta gtaaccaag caggtagaat aaaacgtaat 480
 tatgttgaaa aagcaaaaga acagatggaa caaagtgggt caaagttctt aggtattatt 540
 cttataaag ttaatgaatc tgttgctact tacggcgatt atgga 585

<210> 610
 <211> 527
 <212> DNA
 <213> Streptococcus agalactiae

<400> 610
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 ctttttttac ttttattgct atgaattcga ttttattata tctattgaat tcatttttaa 180
 aatattatcg aaaatattct tacgctaagt tttcacgaga taccaaagt gttttgataa 240
 cgaataagga ttctttatca aaaatgacct ttaggaacaa atacgacat aattatctg 300
 ctgtctgtat cttggactcc tctgaaaagg attgttatga tttgaaacat aactcgtaa 360
 ggataataaa caaagatgct cttacttcag agttaacctg cttaactggt gatcaagctt 420
 ttattaacat acccattgaa ttatttggtg aataccaaat acaagatatt attattgaca 480
 ttgaagcaat gggagtgatt gtcaatgtta atgtagaggc acttagc 527

<210> 611
 <211> 360
 <212> DNA
 <213> Streptococcus agalactiae

<400> 611
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 cacacatggc ggcccagcga cgtttatgtc agttatttct ttagggaaat taccagttgt 180
 tgttcccagg agaaagcagt ttggtgaaca tatcaatgat catcaaatac aatttttaa 240
 ttcgattgcc cacctgtatc cttggcctg gattgaagat gtagatggac ttgcggaagc 300

gttgaaaagg aatatagcta cagaaaaata tcagggaaat aatgatatgt tttgtcataa 360

<210> 612
 <211> 384
 <212> DNA
 <213> Streptococcus agalactiae

<400> 612
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 aaacttctgt aatgaatcag aaattcaacg aaaactcatt agattttata acaattttta 180
 atgaaataag tagtttggtt cctgccagat tagctaatta tgttgaagcg aaatttttaa 240
 gagaaaagat aaagtgtctc cgaaaaatgt ttgaattagg tagtaatatt gacaataaaa 300
 tcaaagtaca acgagagatt tttttcaaag acattaaatc ataccggttc tataaagcgg 360
 tcaaatactt atcattaaag ggat 384

<210> 613
 <211> 514
 <212> DNA
 <213> Streptococcus agalactiae

<400> 613
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 gttgattcag atgataaagt ttcctctgat tacatagcga atttgtataa tgctattcaa 120
 aaacatgatt cgtctatagc tatcgggtgc tatttagaat tttatgaaag acataatagc 180
 ataagaaatt atgaatattt agacaaagtg atatcagttg aagaagcact actaaacatg 240
 tatgacatta aaacttatgg ttcaattttt attactgcat ggggaaaatt attccataaa 300
 tctatattca atgatttaga atttgcatta aataagtatc atgaggatga gttctttaac 360
 tataaagcat acttaaaagc taattctata acatacatag acaagcctct ctatcattat 420
 cgtatacgag taggtagtat catgaataat agtgataatg ttataattgc tagaaagaaa 480
 cttgatgttt tatcagcatt agacgagcga ataa 514

<210> 614
 <211> 524
 <212> DNA
 <213> Streptococcus agalactiae

<400> 614
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ttccgtatgg tttttcaaaa tattgtctct caattgaggt taattcttta gtggggttac 120
 ctcatgacat aaggagtaag aatatataag aactaccgag aaaaaaatta tttgatagtc 180
 ttaacaaaga acaaaaatca ctgattttca aaatatTTaa acaaaaacca ttaactataa 240
 ctccaaagtc agtattattg ttgacacagc cacttgacaca agataaatgt tataaaacac 300
 ctacagagag gtttcaaagt attcaagagc aatcacgatta ttttgacgat attgtccagg 360
 aatatagaac gttagggtac aatgTTtatt taaaagttca tcctagagat gtagtagatt 420
 attccaaatt gccgtagag ctattaccat caaatgttcc tatggaaatt atagagttga 480
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<210> 615
 <211> 613
 <212> DNA
 <213> Streptococcus agalactiae

<400> 615
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 tatgcTTTT attggccttc agacgagcgg ttctttaagt tcagcccggg tcaaatacgg 180
 agaagaattt aaaagctatt cagggagtgc cttttctgta ggtaatatat ggtttcttat 240
 tatacttttg atagcttttc tatttagaag ttttcttgca ccattagttg gttttctga 300
 atctattttt ttattaatgg tgtgtcaaag ttacgctagc tatgtggtga ctttcttgg 360
 tcagtatttt atacaacaac agaggagttt ggctaattta atattatcct tagccaatgc 420
 agtttcatct gttgactat ctctattttt aatttttcat tggccgatg actttttatc 480
 tagggTTTT ggagcttttg ttctactat aataactgga atagttgcct ttgcttatat 540
 ttattatcat agcaaatctt ttacaatcc taagtatttt cggttcattg tcactgtgtc 600
 tgttcccttg att 613

<210> 616
 <211> 451
 <212> DNA
 <213> Streptococcus agalactiae

<400> 616
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 ttgtccatt tttgaaaggT ttgctttgtc gtgtcggata tagacaatat caataacatc 120

atccacgtca agagggattg cgacaatttc gtcaccgttc aatthttgagt tgaggatacc 180
 agttgccact gtataaccat ctaatccaat cattaaatta aacagagttg ctctatcact 240
 gacaacaatg gattttgggt gaggaatttg agacatcatt tcctcagaaa agtagaaaaga 300
 attatgcagg ccttgatcat aactcagata aggataatct tctaaatctt tcatacttaa 360
 tttttttcta ttagctaagg gattggattt gctcagaaa atatgaggtg tagtagtaaa 420
 aagagttgtg gcaattaagg aattatcgtc g 451

<210> 617
 <211> 361
 <212> DNA
 <213> Streptococcus agalactiae

<400> 617
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 atgcatagtg ttgtgaagaa acgctgaaca gctcagcact tgtattatca cccttataac 120
 gctcttcaag aagtgtctgt tgttctagaa tttgtcgcgc atatgacaga aattccatac 180
 catcttttgt taacgttatt ctttttggat ttcgaataaa aatttggata cccatctcag 240
 tctcaagggt cctaacagcg tttgaaagtg aagggtgggt aatgtagagt tgttttagcgg 300
 cttcattcat gctaccagtt tctacaatct taataacata ttgtaattgt tgaattctca 360
 t 361

<210> 618
 <211> 383
 <212> DNA
 <213> Streptococcus agalactiae

<400> 618
 cgtttcctta gggactgttt tatctgcggc gatgatttta cctatttttag cttttattca 60
 tactagtcca gcttttacga ctcttagcac aattgtaggg acttttattg gttttatttc 120
 aggagtatat ctctcaattg gctcggtagg aaaagcatta caacagggtta tgacatgggt 180
 tccattgact caaatcaatt ctcttttgaa acaggcttta atgaagggtt ctattgcgaa 240
 ggtatttgac aaagccaacg aagccactgt ctctaactat aaagaatcat atgggtgtgt 300
 tttgcgtaat gctgatggag aaaggctgag taatcacttt atgttgattt atatcattgc 360
 cctcattctt attttattgg caa 383

<210> 619
 <211> 535
 <212> DNA
 <213> Streptococcus agalactiae

<400> 619
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 aaagtcgtag tggacaggca atcacttatac tatataaaac tatcttaaag aagataacaa 120
 aactgaagtt ttctaataac tataaccgaaa tcagtaacta caataaaccc tccttagctt 180
 tatcaaaaatt gaatggcttc aaagagtatg ataagacata tgaagacata ctgcattgtc 240
 gatcattgcg tagtcacctc cctaagatat tgaatacgtt tcgtatttcg aattattatg 300
 gtaaacacata cgacatatca acttttcaaa ttatggagga aattgaaaat cccttgggaag 360
 aggagacaga aattaggacc aaagtctctg atgaagaaat attatttaa gcagaagata 420
 gtgcttcaact tccttattat ttaaaaatga gcttgtttca aatggaaatt gctaagttag 480
 ataaccgta tgttttacaa gttgactttt tatcggaaca agtaaagagg gttcg 535

<210> 620
 <211> 519
 <212> DNA
 <213> Streptococcus agalactiae

<400> 620
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 atacagatac ttgtggctac acttttttac tcaatgaaga tggacagtt tatgatgatg 120
 tgactttcta caaatttgat gataaatatt ggttggctag tcataaagct ttggattcct 180
 attagacaa catcaatatt gactataaccg taacagatat ttctgacgag tataaatgc 240
 tgcaaattga aggaagatat tcgggagaaa ttgctcagtc atttatgaa tatgatattt 300
 caacacttaa tttcgtact ttgatagaga tgacttataa aggtgagaaa ggttatcttg 360
 ctagatttgg ttttctgga gaatttggt atcaatttt cctaccatct tctatttttg 420
 ctacttttgt ttcggatgct tgtgaaggta tagcagagtg tgggatgaa cttgatagat 480
 atttaagggt tgaagtggga caaccatta ctgatattt 519

<210> 621
 <211> 573
 <212> DNA
 <213> Streptococcus agalactiae

<400> 621

cgagcataaa cagcatctct tcgacttaaa agaaggaatt tctaaacatt tatataaaaa 60
 tcacgactct attttagaat cttatacagg aagcataact agtgaccag aggttcctga 120
 gcaatacaaa gatgagacac gtaattttta atttgctttt accgcttttg aagaggctct 180
 tgcttcttca ggtgtaatt taaaagctta tcataatatt gctgtgtgtt tagggacctc 240
 acttggggga aagagtgctg gtcaaatgc cttgtatcaa tttgaagaag gagagcgtca 300
 agtagatgct agtttattag aaaaagcatc tgtttaccat attgctgatg aattgatggc 360
 ttatcatgat attgtgggag cttcgtatgt tatttcaacc gcctgttctg caagtaataa 420
 tgccgtaata ttaggaacac aattacttca agatggcgat tgtgatttag ctatttgtgg 480
 tggctgtgat gagttaagtg atatttcttt agcaggcttc acatcactag gagctattaa 540
 tacagaaatg gcatgtcagc cctattcttc tgg 573

<210> 622
 <211> 610
 <212> DNA
 <213> Streptococcus agalactiae

<400> 622
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 ttgctagtaa tttcaacgac tttgaagcat tacgctttaa aggggctaga ccacccaaaa 120
 ctgtcaaccc agcacaatth aggaaaatgg atgatttttc caaaatgggt gccgtaacaa 180
 cagctcaagc actaatagaa agcaatatta atctaaaaaa acaagatact tcaaaagtag 240
 gaattgtatt tacaacactt tctggaccag ttgaggttgt tgaaggtatt gaaaagcaaa 300
 tcacaacaga aggatatgca catgtttctg cttcacgatt cccgtttaca gtaatgaatg 360
 cagcagctgg tatgctttct atcatthtta aaataacagg tcctttatct gtcatttcga 420
 caaatagtg agcgttgat ggtatacaat atgccaagga aatgatgcgt aacgataatc 480
 tagactatgt gattcttggt tctgctaadc agtggacaga catgagtttt atgtggtggc 540
 aacaattaa ctatgatagt caaatgthtg tcggttctga ttattgttca gcacaagtcc 600
 tctctcgtca 610

<210> 623
 <211> 606
 <212> DNA
 <213> Streptococcus agalactiae

<400> 623

agcgatatga tgctttcttt tctctttcaa cagacttta tttttatca gaagaagaaa 60
 ttgaacgcat ctgttctatt gaaagagact tgttacgcca agaaaaattt gatgctgtat 120
 tgacagggta ccgtctatct attgttacia gttgtcgttt agaaagcata ccattaattt 180
 ggattatttc aggggcaacg catatcagtg aaattggtga aaactcagaa ggaatattgc 240
 ctaatgggaa gataagtaaa gctagtaagc ctcaacaaa ggattttatc aaaagagtaa 300
 tcactactta ttcaacaaat gttaaaacgt ggaataacta tattaaaaaa tatggtggca 360
 aaccttttaa taatgcttta gaattattta ctggtgatct aaactggta acagattact 420
 ctttgtttta tgaatttgat aaagattcgt cctataaaac gataggacct attttgatag 480
 ataatgtagg tttttcaaaa tgcagccaaa ttaatcaaga caataagact gtactgctca 540
 gctttggtac ttcatttaaa cgagattggg tggaaatctt tttaaagaca ttaccaaggc 600
 attatc 606

<210> 624
 <211> 511
 <212> DNA
 <213> Streptococcus agalactiae

<400> 624
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 caagcaata gacaggtaag caaagataaa ctgttaacag ggagttattt tgtgtaccaa 120
 tgcttaaaaa agttagggtt taccaataag atttgcagg aatctttttc tagtgtagt 180
 agttatttaa ttggtttgcc aaaggggaaa attagttact ctaattctgg tgactatcat 240
 attctaacct atgctcccag tggttcaact ggggttgata ttgagaata caaagataga 300
 tcagaacaaa cctaccaaaa ctacctagga gaatcagtta gtagtgatat ggattctaaa 360
 ttattatttt ataaggcatg gttacaaaaa gaaatttcct ataaatgtgg gaaatctata 420
 gatattacct atcaacaat gatagatggc tatatttatg gttatgcttt tgataatact 480
 tttaaagtag aagcggttta cttaaagaa t 511

<210> 625
 <211> 231
 <212> DNA
 <213> Streptococcus agalactiae

<400> 625
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ctaggtgatt ttcattttct tcaatttccc cacctggaag aaaccaagca ccattaggtg 120
 cctgtactaa aataatttta tcatgagttg gatttgaat aatagcatag acaccaaadc 180
 gtgacctata gtttacatta tctatttttt caccgaaagt aggattagtc a 231

<210> 626
 <211> 240
 <212> DNA
 <213> Streptococcus agalactiae

<400> 626
 aatccctttg gcttgagaag gagttgcagt ttggttgcca ttattatttc gtccattacc 60
 gtttctccca cctcggtttc ctctgattg tgtaggagga gtgtttggta aatcttgccc 120
 attaaaggct ctgaaattat ttaaatctcc aaagaaatca tcaaagaaag gattgatgcc 180
 accaggcgca tgtgaaacat gatttaaacc tgaaaaaagt ggattattag ggtcagtttt 240

<210> 627
 <211> 400
 <212> DNA
 <213> Streptococcus agalactiae

<400> 627
 ctattataaa gaacgagggc aaacaactttt agacgttttg caaaccattt acgataaatt 60
 tggctattac aacgagcgcc aattttctct tgagttagag ggtgctgagg ggcaagaacg 120
 tattagtcgt attatggagg attttagaca ggaccaata ttacaagtag gtgagatgac 180
 attggagaat tctattgatt tcaaggatgg ttataaggat tttccaaagc aaaattgttt 240
 aaaatattat tttaatgagg gttcatggta tgctttaagg cegtcaagga cggaacctaa 300
 gataaaatgt tacctttata cgattggttg tacagaagca gatagtttat cgaaacttaa 360
 tgcaattgag tcggcttgtc gtgctaaaat gaatagtact 400

<210> 628
 <211> 628
 <212> DNA
 <213> Streptococcus agalactiae

<400> 628
 ccctaaatca agccataaag gtgattatgg tagtgttctt ctgataggag gtttttatcc 60
 ctatggaggt gctattataa tggcagcttt ggcctgtgtc aaaactggtg caggattagt 120
 tactgtagca acccaaagtt gcaatatccc ctctttgcat agtcaactac cagaggtaat 180
 ggcgtttgat agtgatgatt acaaatgggt ggaaaaatca attgttcaaa gtgatgttat 240

tgtaattggt cctggattag gaggatcaga atcatctcga aaaattttga accagaccat 300
 ggagaagatt caatcacatc aaagtgtcat ccttgacgga tcagccttga ctctgttatac 360
 agaaggtagc tttccgcaaa caaaggctaa aaathtagtg ttgacacctc atcaaaaaga 420
 atgggagcga ttgtcaggta tcgctgtatc gcaacagaca aaagaaaata cccaaccgc 480
 tcttaaatct tttcccaaag ggacgatctt agtcgctaag agttcgata cgcgtatctt 540
 tcaagattta gacgaaaaag aaattatagt aggaggtcct taccaggcga ctggagggat 600
 ggggatact ttgtgtgga tgattgca 628

<210> 629
 <211> 388
 <212> DNA
 <213> Streptococcus agalactiae

<400> 629
 agttttatct attgacgatt taagcttgat tcatattaat aaaacgggac gcctgttagc 60
 ttatcccttt gttgcagcag gtatcttagc tgagaagtcg gaagaagtaa aaggaaaact 120
 gcatcaagct ggccttttaa tcggtcatgc tttcaagta cgtgatgata ttttagatgt 180
 gactgctagt tttgaagaat tggggaagac accaaataaa gacattgtag cagaaaagac 240
 aacttatcca aatttattgg gtttgataa gtcacaggaa atacttgatg atactttgaa 300
 aaaagctcag gcaatcttc aaaatctaga gaaaaagct aactttaatg ctagaaaaat 360
 aatagatata atagagggat tacgggtg 388

<210> 630
 <211> 410
 <212> DNA
 <213> Streptococcus agalactiae

<400> 630
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 ggtaactcta actcaagcaa ctatttcacg tgatatgaat gaaattggca ttataaaagt 120
 gccatcagca aaaggctcgt atatttacgg tttgtcaaat gaaaacgacc ctatctttac 180
 aactgctgtg gcaaagccta ttaaaacaag tattttatca atatcagata agctactagg 240
 tttagagcaa tttatcaata ttaatgtcat accaggtaac agtcaattaa ttaaacctt 300
 cataatgtca cattgtcaag aacatatttt tagtttgaca gctgacgata atagtctcct 360
 tttgattgca aaatcagaag cagatgctga tcacattcgt caatcaatga 410

<210> 631
 <211> 240
 <212> DNA
 <213> Streptococcus agalactiae

<400> 631
 taatgaatga aggtgtggaa catatcattg caattcattt aacgcataca ctatcaggaa 60
 ctattgaagc atcacgccag ggagctaata ttgctggtgc agatgttaca gttattgatt 120
 ctacttttac agaccagtgt caaaaattcc aggttgtaga agctgcgaaa ttagctaaag 180
 agggagctga tttagatacc atcttggtc gtgtggaaga agtacgccag aagtcagaat 240

<210> 632
 <211> 240
 <212> DNA
 <213> Streptococcus agalactiae

<400> 632
 aatgggcatt tctcttattg ttggcaatta acctttcctt cacagcagtg attgcaagtc 60
 gcttaattca agtacgtgag cctaatacag gaaaaatttc gactgggta caagataaag 120
 taaaagtagg tacttttacg accaataagt cgcaactgaa taagacaatt gcactttatt 180
 taaaacaata tcaaactaag aagatgaatt ataagattta tgctgcttca tcttctatac 240

<210> 633
 <211> 200
 <212> DNA
 <213> Streptococcus agalactiae

<400> 633
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 gcactttggt acaaaagact tcgttaaaga aggtgctgtg gtgattgatg ttggtatgaa 120
 tcgcatgaa aatggtaa atgattggaga cgttgtattt gaacaagtgg cagaagttgc 180
 tagtatgata acacctgttc 200

<210> 634
 <211> 545
 <212> DNA
 <213> Streptococcus agalactiae

<400> 634
 tgaatctgga atgtttgata agaaagatat ttttgtagt acagattcag aattgtacag 60
 agagatttgt ttagaacgcg gtatttcagt ggtgatgaga aaaccggaac tttcaactga 120

tcaggcaact tcgtagata tgtaaaga tttttatct gactatgaag ataatcagga 180
gtttgtgta cttcaagtaa cttctccact aagaaaatca tggcatataa aggaagcaat 240
ggagtattat tcttcacatg atgttgaca tggtgtaagt ttttctgaag ttgagaaaca 300
ccctagtctg tttacgacat tgtctgataa aggctatgct atagatatgg tgggagcaga 360
taaaggttat cgtcgccaag atttacaacc tttatactat ccgaacggcg ctatTTTTAT 420
ttctaataaa gaaacttact taagggaaaa aagctttttc acctctagga catatgctta 480
tcaaatggca aaggaatTTT cattagatgt tgatacgaga gatgattTTA tccacgcat 540
cggtc 545

<210> 635
<211> 557
<212> DNA
<213> Streptococcus agalactiae

<400> 635
ttattctttc gacgggatg gcgtaatgg aagagatcca tcaagcggg aatattttac 60
gtcagaatgg tacaaccgac atttctatTTT tacattgtac aacagagtac ccaacacctt 120
accctctct aaatttaaac gttattcata ctttgaaaga tgaatttaaa gatttaacga 180
taggttattc ggatcattca attggatcag aagtacctat cgcagcagca gcaataggtg 240
cagaagtTat tgaaaaacac tttactttag atactaatat ggaaggtccg gatcataaag 300
ccagtgaac acctgatatt ttagctgctt tagttaaagg ggttcgcatt gttgaacaag 360
ccttaggtag atttgaaaa atcccagatc cagtagaaga aaaaaataag attgTTgctc 420
gtaaatcagt agttgctTTA aaaccaatta aaaaaggcga tatttattca atagaaaata 480
ttacggtgaa gcgcccaggT aatggtatTTT ctctatgaa ctggtatgat atcttgggac 540
aagaagcga agatgat 557

<210> 636
<211> 532
<212> DNA
<213> Streptococcus agalactiae

<400> 636
gctgaatagc gaataatgaa gccattgatt caaagattat caaaagataa agaagtcaac 60
ttacaaatta ttgcaacagc aatgcatctg gaagaaaagt acggctatac ttatcgtcaa 120
attgaagaag acggttttga tattgcttat aaagttccct tacatctTTA tgatactgac 180

agaagaactg tatctactgc aatggcgcat ttacaactag gattgaccaa aatTTTTgac 240
aaggaagact atgatctagt catcatttta ggggatcggt atgaaatggt accagttgtg 300
aatgtacggt tgattataa tgtcccagta tgccacctc atggagggga gacatcatta 360
ggcaatTTTg atgagtatat tcgcatgca attactaaga tgagtcacct acacttagtc 420
tctacagagg atTTTcgta acgtgtgatt cagatgggag aacaacctca atTTgtaatt 480
aacacaggag ctctcggagt ggaaaatgct ctatcaattc ctcctctaac ca 532

<210> 637
<211> 507
<212> DNA
<213> Streptococcus agalactiae

<400> 637
agtcattgctg atgcgattgc tccggttatt gatcctcttg tgtatgattt cgtaggTTTT 60
TTTgatgata aagatattac ggagcatgat ggttatcctg ttcttggaaa actTTatgat 120
gtgctacctt accttgaaga tggctcaata gatgcagtat ttattacaat aggtgataat 180
gctaaaagga aagaactatt tgaatatgta gcaaaggatt attatgactt tattattaac 240
atcatttagtc ccaatgcttt agtattgaca ccagatagta tttgtggacg tggtatcttt 300
attggtTTTTg gggctTTTTat aggttctaaa gtgaagctgt ttgataacaa tgttgttaat 360
acaggagcgc tcattgaaca tcatactggt gtagaatcac actgtaatat agcacctaac 420
gctaccataa atggtctTTg ttatattaga gaagaagttt atgtaggtag tgccagtgtt 480
attattcaaa ccttggatat ttcatcg 507

<210> 638
<211> 510
<212> DNA
<213> Streptococcus agalactiae

<400> 638
gcatgaccaa gaggaactaa tgaaacctaa catgcacatt ctgatgtag atgaatttgg 60
taatacagaa tTTaatgtca taaaagaacg ttatcaaagt cTTTTgatg cttatcgtca 120
gcttcgtaaa cgcgtattgg ataagcaaaa aatgaacaa gagaataaat cacgtattga 180
aatgctagaa tttcaaatag cagaaattga gtctgtagcc cttaaatcag atgaagacca 240
aacgctactc aagcaacgtg ataaattaat gaatcataag aatattgcag atactttgac 300
aatgcatat cttatgtag ataacgaaga gTTTTcaagt ttatcgaatg ttcgttctgc 360

aatgaatgac cttatggctt tagaagaatt tgatcgagaa tataaagatc tttccaccaa 420
 tctttcagaa gcttactacg ttattgaaga agttactaaa cgtttagtg acgttatcga 480
 tgatttagat tttgacgctg gtttactaca 510

<210> 639
 <211> 627
 <212> DNA
 <213> Streptococcus agalactiae

<400> 639
 aataccttga aatgtgtcgt gattatgctc tcagccaagt tgacaaacaa cgtgatgatt 60
 ttaaactgtct gggcgtttct gccgattggg aaaatcctta tattacacta acaccagatt 120
 atgaagcaga tcaagtacgt gttttcggtg ctatggcaga taaaggatat atctatcgtg 180
 gtgctaaacc agtgtattgg tcatggctcat cagagtctgc ctttgcgtgag gctgaaatcg 240
 aatatcatga tattgattcg acatcactct actatgccaa taaagttaa gatggtaagg 300
 gaattcttga tacagatacc tatatcgtcg tttggacgac aacaccattt actgtaacag 360
 cttcacgcgg tttaacagta ggaccagata tggagtatgt tgtagtgtta ccagtaggta 420
 gtgagcgtaa ataccttctt gcagagggtc ttgtagatag tctcgtctgt aagtttggt 480
 gggaaaactt tgaaattgtg actcatcaca ctggtaaaga acttaatcac attggttacag 540
 aacatccatg ggatacagaa gtagaagagt tggttatcct tggagaccat gttacaacag 600
 attctggtac aggtattgtc cacacgg 627

<210> 640
 <211> 326
 <212> DNA
 <213> Streptococcus agalactiae

<400> 640
 acatatgatg tatctatctg gaactctagt ggctggtgca ttgttat ttt caccagctgt 60
 attagaagta catgctgatc aagtgacaac tccacaagtg gtaaatcatg taaatagtaa 120
 taatcaagcc cagcaaatgg ctcaaaagct tgatcaagat agcattcagt tgagaaatat 180
 caaagataat gttcagggaa cagattatga aaaaccgggt aatgaggcta ttactagcgt 240
 ggaaaaatta aagacttcat tgcgtgcca ccctgagaca gtttatgatt tgaattctat 300
 tggtagtctg gtagaagcct taacag 326

<210> 641
 <211> 210
 <212> DNA
 <213> Streptococcus agalactiae

<400> 641
 tatacaaaat caaaacttga taaggaaatc tggaatacac gctttactag agataaaaaa 60
 gtacttaacg tcaaagaatt taaagtttac aatacttta ataaagcaat cacacatgct 120
 gttggagttc agttgaaatcc aaatggttac gtacaacaag ttgatcaaga gattgtaaca 180
 ttacaagcag cacttcaaac agcattaata 210

<210> 642
 <211> 230
 <212> DNA
 <213> Streptococcus agalactiae

<400> 642
 ggagcgcgtt tagtttacgc agtagatgta ggaacaaatc aattagtttg gaagttacgt 60
 caggatcadc gtgttcgttc tatggaacaa tataatttta ggtatgccca aaaagaagat 120
 ttcaaggagg gactgcctga atttgcatcg atagatgtct catttatctc tcttaatttg 180
 attttaccag ctctaaaaga aatttttagtg gatggtggac aagtagtggc 230

<210> 643
 <211> 522
 <212> DNA
 <213> Streptococcus agalactiae

<400> 643
 ctagggaatg gtctgcttgg attgataaag aaaatactgc tgataaatca cctattatcc 60
 aacgtaccga acaaggccaa gtaagtctat ccagcgacaa aggctttaga ggtgctgtaa 120
 cacaaaaagt gaacattgat ccactaaaa aatatgaggt caagtttgat attgaaacaa 180
 gtaacaaggc tggacaagct ttccttcgta ttatggagaa aaaagataac aatacgcgac 240
 tttggctttc tgagatgacc agcggtaacta ctaacaaaca taccttaaca aagatatata 300
 acccaaagtt agatgtctcc gaggtgacac ttgaaacttta ttatgaaaaa ggaacaggtt 360
 ctgttacttt tgataatata tcaatgaaag caaaaggccc taaagactca gagcatccac 420
 aaccgcgtcac aacacaaatt gaaaaaagcg ttaatacggc tttaaacaaa aattacgttt 480
 ttaataaagc tgactaccaa tacactctaa ccaatccgtc tc 522

<210> 644

<211> 586
 <212> DNA
 <213> Streptococcus agalactiae

 <400> 644
 tcccacttaa ctatgttgct cttggagatt ctctgaccga aggtgtgggc gatacaacct 60
 ctcaaggtgg ttttgttcca ctgctatcag aatcactcca taatcgatac tcttaccaag 120
 tgacttctgt taattatggt gtgtctggga atactagtca acaaatttta aaacgtatga 180
 cgacagatcc tcaaatcgaa aaagatttag agaaagctga tttattgacg ctaactgttg 240
 gtggtaatga tgtcttggt gttattcgt aagagctcag tcatttatca ctaaattcct 300
 ttgagaaacc agcagaagca tataaggaac gtttgaaaga aatccttgca aaagcaagac 360
 aagataatcc taaatgcct atttatgttt taggcattta taatcctttt tacctaaact 420
 ttccacaatt aactaaaatg caaacctgta ttgataattg gaataaagct acaaaaagaag 480
 tagttgatgc ttcagaaaat gtttattttg tccaattaa tgaccgcctt tataagggaa 540
 taaatggtaa agaggttatt acagagtcac caaatagtca ggcaag 586

<210> 645
 <211> 511
 <212> DNA
 <213> Streptococcus pyogenes

 <400> 645
 tagctcatat tgcgcaaag acaagtgttg ctattgcttt ggctggagca atgggtagca 60
 gtttattagc taatagcaca acgtacgctg ttagtggcaa agaaaataaa aaaagcgatg 120
 tcaaatatga aacgaccaa gttatggaag ctaacgcaac ttctctaaa gaagacaatc 180
 atgtcatgca cacattagac ggctcaatga gtactgtctg ggaggaaaat tcacctggtg 240
 gtggtgttg tgaggtactt tcctacaagt ttgctcccc gatgcatatt gggagaattt 300
 taattgttaa tggagacaca tctagcaagg agaattacta caagaaaaat agaattgcaa 360
 aggctgatgt taaatactat aacgggaata aattggtcct ctttcaaaaa attgaattag 420
 gcgacaccta cactaaaaaa ccgcatcaca ttgagattga taaaaaatta gatgttgatc 480
 gtattgatat tgaggttaaca gaggtccatc a 511

<210> 646
 <211> 300
 <212> DNA
 <213> Streptococcus pyogenes

<400> 646
 ttaaatacgc taaagccctc ttgagggcct ttttagatac aattgacatc ttaaaatgga 60
 taccagtttc tgtgaaacaa tctttgattg tgaacaaaca aagcataatt tagagtatta 120
 aaatctggac cctgctatct atggtaagtc tttttgttat tgttaaagag gttaagcggg 180
 atgttaatat gttttagcta aaaaatgtag tgaaaaatga gtacgtagac tattgtaata 240
 gtaattccgt aaaattgttg aaaaagaaaa tgggaaatac cttgtcaaat taagcacct 300

<210> 647
 <211> 579
 <212> DNA
 <213> Streptococcus pyogenes

<400> 647
 ccggttatgt taatggaaag agaaaatata ttaggcgaga aggtttcaa actaagcagg 60
 ctgcaaggga aaccttaatt agtttacaag ctgaacttga taaacctaaa tcaagtatga 120
 catttgagc attgacagat caatggctaa aggaatatga aaaaaccggt cagggcagta 180
 cctacttaaa aacagaaga aatattaata aacatat ttt gccaaaactt gataaagtga 240
 agattggaga catcaatcca ctacttatcc agcggcttac tgaagaatgg tgcaacgatt 300
 taaaatatgg aggaaaaatt cttgggcttg ttaggaatat cttaaatcta gctgttagat 360
 acggatatat caataacaat ccagctttgc caattacacc tccaaaaata aaaaggaaaa 420
 gaaaaatgaa taataat ttt tatacacttg atcaacttaa acaattcctt gaactagttg 480
 aaaaaactga caacattgaa aaaatagcct tgtttagatt attagcattt actggaatac 540
 gaaaagggga gcttctggca ctaacttggg atgatttga 579

<210> 648
 <211> 507
 <212> DNA
 <213> Streptococcus pyogenes

<400> 648
 gctat ttggc cctgtgtagc aaaaagtgc ctcatcatgt gcgagtaaa atgaacgtcg 60
 caat ttttat taat tttttt aaataagcag tagatgtaat ggctaccgat tgg ttttct 120
 acaaaagatg gctttacttt ttcgtcgtct ctaaaaaata ggaaatcagc cttat ttaag 180
 atgcatcgt tgacacggc tattttgata gaagtatcaa tagct ttttt tagcagttgt 240
 gatgtctcaa aatctaaata cacatatcgt tccgaataag ctgtctttag gcctccgcca 300
 tcttttctac ctcttgcct tgattcgtct atctttacga ccgcacaatc tttatcatta 360

aaagttatat tcctaattt tatgccagct acctcgettc tacgcaatcc aagatatggt 420
 atcctaacca ttgcgtagtc ataatcatca agcatttttc tggcaacttt atcccaagct 480
 ttaaattcctt gcattgatct acgtttg 507

<210> 649
 <211> 501
 <212> DNA
 <213> Streptococcus pyogenes

<400> 649
 gctcacggtc actaataatc tctactgggc gtgcgatatg gctggcaatt tcttttgaaa 60
 tatcttctgg atcctcgaaa ttagggcat cagcagtgag aatgacggtg aggtttggat 120
 gctgatgaat caccctacca aaatcagctc gtctgctctc gcctttattt cctggtgcac 180
 ctaaaatcaa cattaatttg cctgtctgat gttcttccac aacgctgagt aatttttcta 240
 agctgtcacc attatgggca taatcaacaa aaactttagc atgatttgc atagtgagga 300
 cttccatacg gcctgggacg cgagtcttag cgataccttt ttgaatatca gctaggctag 360
 caccctaacg aaggcaggca agtccagctg ccatagcatt ttcttggtta aatggccaa 420
 ttaattgaat gtcataatgg ccagctaatt gtcctttagc ttcaaaggag aaggcttggc 480
 tagtggtgat ctggttgca g 501

<210> 650
 <211> 632
 <212> DNA
 <213> Streptococcus pyogenes

<400> 650
 cccagttcaa ttagattacc ctggtgacca agcaaacgca gcaactgttc aggaagccca 60
 gtctttcaaa caatctgttg aagcatctct tggtaaagaa aatgtcattg tcaatgttct 120
 tgaaacagaa acatcaactc acgaagccca aggcttctat gctgagaccc cagaacaaca 180
 agactacgat atcatttcat catggtgggg accagactac caagatccac ggacctacct 240
 tgacatcatg agtccagtag gtggtggatc tgttatccca aaacttgga tccaagcagg 300
 tccaaataag gatgttggg cagctgcagg cttgatact taccaaactc ttcttgatga 360
 agcagcagca attacagacg acaacgatgc gcgctataaa gcttacgcaa aagcacaagc 420
 ctaccttaca gataatgccg tagatattcc agttgtggca ttgggtggca ctccacgagt 480
 tactaaagcc gttccattta gcgggggctt ctcttgggca gggctctaaag gtcctctagc 540

atataaagga atgaaacttc aagacaaacc tgtcacagca aaacaatagc aaaaagcaaa 600
 agaaaaatgg atgaaagcaa aggctaagtc aa 632

<210> 651
 <211> 534
 <212> DNA
 <213> Streptococcus pyogenes

<400> 651
 ttgatgggtg ttgggtatgg ggcacgtaat tctatnttaa tctcagttat agcgacccta 60
 attaatatca ccattgggggt agtgtagga gccatatggg gagtttctaa agcatttgat 120
 aaagttatga ttgaaattta taacattatc tcaaatatcc cttctatgct tattatcatt 180
 gttttgacct attcattagg tgcaggattt tggaatttga ttctagcttt ctgtatcact 240
 ggatggattg gtgtcgcta ctccatccgt gttcaaatct tgcgttaccg tgatttagaa 300
 tacaaccttg ctagtcaaac tttgggaaca ccaatgtaca agattgctgt taagaacctc 360
 ctgcctcaat tggtttcagt tatcatgact atgttgtcac aaatgctacc agtttatgta 420
 tctctgaga cttcttate cttctttggg attggtttac caaccaccac tccaagtta 480
 ggacgtttga ttgctaatta ttcaagcaac ttaacaacaa atgcctacct cttt 534

<210> 652
 <211> 340
 <212> DNA
 <213> Streptococcus pyogenes

<400> 652
 tcgaagagat tttctatgat ccaagacacc cctatacatg gagtttgctg tctagcttac 60
 cgcagttggc agatgaatct ggtgaacttt acgctattcc aggaacgcct ccatcacttt 120
 attaccaat tatcggagat gcctttgcac ttcgctcaga atatgctatg gttttagact 180
 ttgaaaaagc acctccggcg attaacgtat ctgagactca ttgggcaaaa acatggcttt 240
 tacaccaga ggctcaaaa gttcaaaaac cagaagtcac tcaaggtttg catcaaaaaa 300
 tcttaaggaa aatgtcacia caggaggaag gaaatgtctg 340

<210> 653
 <211> 542
 <212> DNA
 <213> Streptococcus pyogenes

<400> 653

caccagacaa cctttccttc aagaccttat caattatctc gaccagcatg atcacgttat 60
 attacgagag atcaaaaaag cctttcctaa tgtgacaggt attgacaagg ccatcgaaag 120
 ctatgttcaa gctggctata ttcgccgtga aaataagcgt tatggcatca atcttccttt 180
 ggtgagttct gatcagcagc tggccttaga cactatgctt tttgtggaca cctgttcagc 240
 tatgtatgaa aatatttttag cggttgtttt tgagactcag ctaacaaacc aaaccaatcg 300
 cgtgatgatc aaggaaaaga ccaacatcac gagagacgat ttgaccctgg ctaattattt 360
 ttaccgtctc aaaagaggtg agaagccatc agctgagcag atggacttgt atgacctctt 420
 gggggatgtg aatcaggaat atgcccttaa atatatgaca acttttttgc ttaaattcac 480
 gcgcaaagac tttgtgatgc aaaaacgtcc tgatatattt gtggaagctc tggttacact 540
 tg 542

<210> 654
 <211> 616
 <212> DNA
 <213> Streptococcus pyogenes

<400> 654
 ttaattgcag tagcagcatc tattggtggt gtaggtattg ccttgtaac tgaaaattat 60
 gtcaaaaaag acatgaaagc agctgctcgt ttaatcatta acaacattga aatgttagtg 120
 atgtttttgt tacctgctct tactggggca attatttttag caagacctct atattctggt 180
 ttttacggag ctacgagga gcgtgccatt cacctctttg tggcggttct ctttcaaacc 240
 ttgctactgg cgctttacac cctcttttca cccgatgcttc aagctctttt tgaaaatcga 300
 aaagcgattt actactttgc ctatggtatc ttgattaagt tagttttaca gataccgctt 360
 atttatttgc tacatgctta tggtccttta ctacgacga cgattgcttt agtggtgccg 420
 atttatttga tgtatcgacg cctatatcag gttactcatt ttaaccgcaa actggtgcaa 480
 aaacgtttat tattaacctt aattgaaacc ttattaatgg gactggctgt gtttgtggcc 540
 aactggctat tgggctatgc ctttaaaccg acaggccgct tgaccagcct tctttacctc 600
 ctcattattg gtggct 616

<210> 655
 <211> 208
 <212> DNA
 <213> Streptococcus pyogenes

<400> 655

agcagtaatc tttggtactg ttttgggtca tgttctatgt gtcccaattc atgcaagatt 60
 acttttttcc tgtctttttc agacaggttt ttattaacat agattattcg atgacagga 120
 taataaaaatc ctgacctatc ccacattgtg tctgggaact caaatagttt tatgtgttac 180
 tgattaagta tctcatctat cttcacca 208

<210> 656
 <211> 230
 <212> DNA
 <213> Streptococcus pyogenes

<400> 656
 ttatctgatt taggacatth atcaaatgaa gatggagcgg gagccatgat tagaagcctg 60
 gggtaacaata ccaaaaaaat atacctaggt catctgagta aagaaaataa catcaaagag 120
 ttagcgcata tgacgatggt caatcaactg gctatggcag atttagcagt aggtacagac 180
 tttacggtcc atgatactc tccagatact gcttgtccat taactgatat 230

<210> 657
 <211> 411
 <212> DNA
 <213> Streptococcus pyogenes

<400> 657
 cacgagaagt tcatttcaat ctttatttaa ttgaaactgat gagccttttt tagaaaagtta 60
 tcatgaaacg attacgtcca tatgtgaaag ggtacctaaa agaaagtatc ttaggtcctc 120
 tttttaaatt attagaagct ttatttgaat tattagtccc tttgttaatt gctaactga 180
 ttgatatac gattagtcaa cacaacagcc agggaaatth gagggttggt ttaacattat 240
 ttggtttagc aaccattggc ttattgctth ccggtacagc ccagtattht tcttcgaaag 300
 cagctgttgg ttttacaaga caaatgacag atgatttgtt taaaaaatc atgtttttga 360
 gcaaggagga ccaagaccat cttggttatg ctagtctggt atcacgattg a 411

<210> 658
 <211> 660
 <212> DNA
 <213> Streptococcus pyogenes

<400> 658
 aagaaatgga gcaaacaaac aaggagctth tgaaatcaag aaaaataaaa gtcaagaaga 60
 atataattat gaagtttatg ataacagaaa catacttcag gatggggaac ataaacttga 120
 aataaaaaaga gttgatggga caggtaaaac ttatcaaggt ttttcttthc agttaacgaa 180

aaatsttccc actgctcaag gtgtaagtaa aaagctgtat aaaaaattga gtagtagtga 240
 tgaagaaaca ctaaagcaat atgcctctaa atatacaagt aataggagag gagatactag 300
 tggtaatcctt aaaaagcaaa ttgctaaggt tctgacagaa ggttacccaa ctaacaaaag 360
 tgattggtta aatggattga ctgaaaacga aaaaatagaa gtaaccagg atgcaatttg 420
 gtatsttaca gaaacgacag ttccggctga tagaagttat acgaatcgca acgtaaatag 480
 tcaaaaaatg aaagaagtgt atcaaaagct aattgataca acagatatag ataaatatga 540
 agatgtacaa tttgatttat ttgtgccaca agatacaaac ttacaggcag taattagtgt 600
 agagcctgtt atcgaaagcc ttcttggac atcgttgaag ccaatagccc agaaggatat 660

<210> 659
 <211> 410
 <212> DNA
 <213> Streptococcus pyogenes

<400> 659
 aacaggttga tcagcatagg ccatgacatt ggtggcttgc atagcccaat gaatggcttt 60
 tttgtcagct ggactaagat ttccaaagta agattgatgg ggaaaacgtc cgtaagaaac 120
 caattcgtaa acagttatgc cgttagttgc ttcttgaact tgaggtaaaa gagctagttt 180
 tttagcaacc tctttagttt ctaatgtggc aatgttttgc ccatttaa atacaactcc 240
 ctgttttggg ggtaataatc ttgtcagtgc ttttaataaa ctagacttcc cacagccatt 300
 ggcgccaata atggtcgtaa ttttaccttc aggaatataa aacgataatt tatcgatgat 360
 ggtacgctgt tcataggcaa ttgtgaggtc ttcagcacta attgttgtca 410

<210> 660
 <211> 718
 <212> DNA
 <213> Streptococcus pyogenes

<400> 660
 tcaaccata ccattgaaac tagcgccaga aactgcacaa agcggcaaaa ggtatcggta 60
 atgatgaggt gtaaaaatgtt tcataagatg aggaatgact aagccgataa aagaaatgct 120
 tccagcaatg gctacagctg ctgatgataa aataagaacc aaaatcataa agactgcact 180
 gatcaagttg gttttttgcc caagagcttt tgcctgagac tcacttagac taaggacggt 240
 cagtgataa gataatagct gggctaaca aagactaaga ataataagag gagcaatata 300
 gccgatcatt tgccaattga ccccgacaag acctcctgct tgccagccga taacagcatt 360

tgccagatga tagtaattgg taataccttg acctaagtct gatagcagta tggaaacat 420
 agctcctgct aagacaaggc ggagctgatg gtagcctttg ccagattgat aagaaaggcc 480
 aaagactaag gttgctgcca ggctagacc taacaacgaa agcagaataa tgaggaata 540
 gtgcaagtga ggtacaaaag cataagccag taccaaggct agtcctgctc cagcattaat 600
 gcctaaaagg ccaggctcag cgataggatt acgtgtgatt gcttgcata tagttccaga 660
 aacagctaac gcagagccag ttaaggtagc accaaaaagt ctcgtaatac gtatagcg 718

<210> 661
 <211> 574
 <212> DNA
 <213> Streptococcus pyogenes

<400> 661
 gcaacgacga cataatcacc aatatagtct ggcaagactt cctgcgacaa tgacaggtaa 60
 ccttgtttaa aaacttcagt cttcactttt tcaggagcat cataatggaa agcttgatgg 120
 ataatctctc cgccacgtcc ccagcttcta ccaaaaagg aaacgtcttt ttcataaagc 180
 ccataatag taaaggttgc tttgtcact gtaacggcct tgacttcttt ttcataagct 240
 gctgttttag tttccaatc ttttaaccac ttcttggtt tgtcttcttt gttaaagatg 300
 cggccgaagt cagataaac ttgtaataa tcacgtttgc ggtattcaat cgagataaca 360
 ggcgcaattt ctgccaattg ttaaatattt tcttctgtag agccaacaac aatgaggatc 420
 ggcttaagcg ttgtaacggc ttctaaatca gttgcagcaa cttgctttgc tttttttaca 480
 gtctttgcta agatggggtt tttctgtca taagaagtaa ccccgactag attcatatct 540
 aatTTTTTga ggtaaccagt gtaagttgaa gccca 574

<210> 662
 <211> 545
 <212> DNA
 <213> Streptococcus pyogenes

<400> 662
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 tcattccgat taaaatacta atgggtattg ttattttatg attactccct accaagtatg 120
 tactaaagtg tccagctatt aagccgataa aactaatatt accaaccaaa agaactca 180
 aagcacctaa gccagctgct aagacaagta tcaaacgacg cttacggttt aaaggagtc 240
 ctagcccaat agcagtatta tcagctaata ccataatatt aaggaaatgg gcttgactat 300

aagtcaatag ccaaaaacac aataacaaag gagcgatgac actcagagta ggccagtcgt 360
 ctccatttaa ttggccgcta agccaattga tgaccaaatc gactttgtag cgattaatat 420
 gaccaacaag agcaaccatt agacttgaaa gcatggtagt aacagctaca ccagtaagaa 480
 ttaaccgtgt aggatcaatt tgtccttggt ttgtcaaaga tagccaataa acgctaaagg 540
 ttggt 545

<210> 663
 <211> 647
 <212> DNA
 <213> Streptococcus pyogenes

<400> 663
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 tcctatagaa gcgataaaaa tggctactat ttatcattgg attaaccatt cttttttccc 120
 tatcatcggt cgtggagaaa tgatggatat gactcgaggg cgttctatca gtcgttttaa 180
 tgctcaatct catgttgctg gcattgaagc acttcgtgct attttacgta ttgctgacat 240
 gtctgaagag cctcacggtt tggcacttaa aacacgtata aaaacactcg tcacacaagg 300
 gaatgttttt tacaatgtct atgataatth gaaaacctat cacgatatca aacttatgaa 360
 agagctacta agtgataactt ctgttccagt ccaaaaactt gatagttacg tagctagttt 420
 caatagtagt gataaattgg cactatataa taataaacac gattttgctt ttggcctatc 480
 catgttttcg aatcgaactc aaaattatga agctatgaat aatgaaaatc ttcattggctg 540
 gtttacttct gatggaatgt tttacctata caataacgat ttaggacact acagtgaaaa 600
 ctattgggca acggtaaatc cctaccgctt acctggaacc acagaaa 647

<210> 664
 <211> 585
 <212> DNA
 <213> Streptococcus pyogenes

<400> 664
 cttactggtc ccaaagggtc taaaggagac actgggtctcc aaggtaaac tggaggaact 60
 ggtcctcggg gccctgctgg caagcctgga acgacagatt atgatcaact ccaaaataaa 120
 ccagatctag gtgcgtttgc acaaaaagaa gaaactaata gtaaaatcac caaattagaa 180
 tcaagcaaag cagataaaag cgctgtttac tcaaaagcag agtcaaaaat agagctagac 240
 aaaaaattga gcttaacagg cggcatagtg acaggacaac tacagtttaa acctaaataa 300

agtgggatta aaccctcatc ttccgtagga ggagcgatta acattgatat gtctaaatcg 360
 gaagggtgctg ctatgggtgat gtatacaaat aaagatacta ctgatggacc attgatgatt 420
 ttacgttctg acaaagatac gtttgatcag tcagctcaat ttgtggatta cagcggtaag 480
 actaatgctg taaatattgt aatgcgccag ccaagcgac ctaatttttc ctcggcactt 540
 aatataacca gtgccaacga aggcggtagt gcgatgcaaa ttaga 585

<210> 665
 <211> 537
 <212> DNA
 <213> Streptococcus pyogenes

<400> 665
 aatctactga ctaacaagcc aatattgat ggattagcga caaaagtcga gaccgctcag 60
 aaactacaac aaaaagcaga taaagagacc gtctatacaa aagctgaatc gaagcaagag 120
 cttgacaaga aattaaatct caaagggtgc gttatgacag gtcaactaaa atttaagcca 180
 gccgccactg ttgcttattc ctcgtcaacg ggtggagcgg tcaatattga cttgtcgtct 240
 accagagggtg ctgggtgtgt tgtctattct gacaatgata ccagtgatgg gccgttaatg 300
 agcttgcgga cgggtaaaga gacctttaat caatcggcgc tttttgtcga ctataagggg 360
 acaacaaatg ccgttaatat tgcgatgcgt cacgcaacca cccccaattt ttcacggcg 420
 cttaatatta ctacgagcaa tgaaaatggt agtgcaatgc agctacgagg gtcagaaaaa 480
 gcgctaggaa cgctaaaaat tactcatgag aaccaagta ttggagcgga ttatgat 537

<210> 666
 <211> 516
 <212> DNA
 <213> Streptococcus pyogenes

<400> 666
 tttcaacgta tgggttatgt caattatfff tcaagcaaag aattaaaga taatgcttct 60
 aaagtagata gtagtgaac gacagaagca actagtgcta acaaagctgt ctatgagaag 120
 tatattgatt ctcttgcaa tggctggcag gtaaaacgct tccccactag caaacaggtt 180
 tatgcaatc gcaatattcc tatttacgaa cgtgtttgga actttttctc aatctagtt 240
 ggtattgatc acccttgaa gattcaggat aaagataatc caaattagc taggtatatt 300
 cgcctagaaa aagataaatc aggtggctgg tcactgtgtg ggtcggggac aaaacataaa 360
 tatctcctct atactaacgg aaaatttctt tatcttcacc aaaactttgt taccetaaac 420

ttaggaacat cttatccaac atacagcaat attcctgttc ttcaggttat ttcacaaggg 480
 caaggacgaa cagctcttca agatgtgacc ttccca 516

<210> 667
 <211> 604
 <212> DNA
 <213> Streptococcus pyogenes

<400> 667
 tctcactagg caaacctatt atcgttttat taaaaataat cttgacattt cttcgaaaaa 60
 gttactttat atcttagaca acttgaatgt caatgttgat gagtttctct ttattagtaa 120
 taactttaaa caatataaag aatttattga tatggatacg gcaaaacatt attttgaatg 180
 ccgaaacata gaaggtttaa atcatacct tgattcctat aaagatagta agtcaacaaa 240
 ggaaaagaac ctttttgctt tgggtcaaggt gttattagca actcttactg aggaagactg 300
 tctgacagag cggacttatt tgtcaaaacta tcttattaat attgagactt ggagtcaacta 360
 tgagactgtg ctttttaata attgtatggt tatttttagag tcttgcttta ttgagatggt 420
 gttttcaaaa gttattgtga acctcgataa atacaatacc ctaaggtatt atgggaatga 480
 atcgattcgg atgtttgtca atatgttgat tttgtttatt cagcgacaag agtatgataa 540
 agcttctgag attttgcaaa aaattgaaga ttatcagcta aatgatgatt gcttatatga 600
 acgg 604

<210> 668
 <211> 522
 <212> DNA
 <213> Streptococcus pyogenes

<400> 668
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 aggcttacga ctatgcttat gctaatcgtg ggatgaaaga ggatgatattt aaggatgtca 120
 aaggcaagat tgcccttatt gaacgtggcg atattgattt caaagataag gttgcaaacg 180
 ctaaaaaagc tgggtgctgta ggggtcttga tctatgacaa tcaggacaag ggcttcccga 240
 ttgaattgcc aatgttgat cagatgcctg cggcctttat cagtcgaaaa gacggctctct 300
 tattaaaaga caatcccaa aaaaccatca cttcaatgc gacacctaag gtattgcaa 360
 cagcaagtgg caccaacta agccgcttct caagctgggg tctgacagct gacggcaata 420
 ttaagccaga tattgcagca cccggccaag atattttgtc atcagtggct aacaacaagt 480

atgccaaact ttctggaact agtatgtctg cgccattagt ag 522

<210> 669
 <211> 554
 <212> DNA
 <213> Streptococcus pyogenes

<400> 669
 cagaaaccac aacgacaagt gagcaacca aaccagaaag tagtgagcta actatcgaaa 60
 aagcaggtca gaaaatggat gatatgctta actctaacga tatgattaag cttgctccca 120
 aagaaatgcc actagaatct gcagaaaaag aagaaaaaaa gtcagaagac aaaaaaaga 180
 gcgaagaaga tcacactgaa gaaatcaatg acaagattta ttcactaat tataatgagc 240
 ttgaagtact tgctaaaaat ggtgaaacca ttgaaaattt tgttcctaaa gaaggcgta 300
 agaaagctga taaatttatt gtcattgaaa gaaagaaaaa aaatatcaac actacaccag 360
 tcgatatttc cattattgac tctgtcactg ataggaccta tccagcagcc cttcagctgg 420
 ctaataaagg ttttaccgaa aacaaaccag acgcggtagt caccaagcga aaccacaaa 480
 aatccatat tgatttacca ggtatgggag acaaagcaac ggttgaggtc aatgacccta 540
 cctatgcaa tggt 554

<210> 670
 <211> 518
 <212> DNA
 <213> Streptococcus pyogenes

<400> 670
 agtgactaag aaacttgatg ttagagatgc tagagatttt tttattaact ccgaaatgga 60
 cgaatatgca gccaatgatt ttaaagatgg agataaaata gctgtgttct cgtcccatt 120
 tgattggaac tacttgtcag aaggaaaagt cacagcatat acgtacggcg gaataacacc 180
 ctaccaaaaa acttcaatac ctaaaaatat ccctgttaat ttatggatta atggaaagca 240
 gatctctggt cttacaacg aaatatcaac taacaaaaca acagttacag ctcaagaaat 300
 tgatctaaag gttagaaaat ttttaatagc acaacatcaa ttatattctt ctggttctag 360
 ctacaaaagt ggtaaattag ttttcatac aatgataat tcagataaat attccttcga 420
 tcttttctat acaggatata gagataaaga aagtattttt aaagtataca aagacaataa 480
 atctttcaat atagataaaa ttgggcattt agatatag 518

<210> 671
 <211> 612
 <212> DNA
 <213> Streptococcus pyogenes

<400> 671
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 gaggttagtg ctagtagtag tacggagagc agtaccacta cagctaatac tggtagcggg 120
 acggcaagtg ggatgactgc cactactcct agtgctacga cagatactgg tgaagcagct 180
 gggagcggag ctaggagtga agctaagtgt gcatcgtccg tagtatctag cgaagaaagt 240
 cagagttcag gcactactcc agcctcacco caagcacaga cagctccagc agcaacgtca 300
 acatcatcgg tttcttctag taatgagaaa actcccaaga cagcaactac aactacatca 360
 tcgactccag tagcaagtac cagtaataat agcaacaaag taactagtac tgaagctgaa 420
 acacagacgg tggacgtgga acggtataca gttgataagg aaaattcaaa gctaaatatt 480
 aaagacggta agactccaaa aactaggagt agtgtaata aagacacaaa acttattaga 540
 aaccgcgatg acaaacagcg tgatatcgtt gatgttactc ggacagttga aactaacgaa 600
 gatggcctat tg 612

<210> 672
 <211> 500
 <212> DNA
 <213> Streptococcus pyogenes

<400> 672
 gtactagaca tggccgaaaa agtgggaata agtttaccta gtagtctgaa gtcggcagtg 60
 aaagtccttg gcttaactaa tagtgcaata ggttctatth tagggaaagg tttgacagag 120
 taccttggtt tgacagaata tagttcagat aacttagatg gaggagggtt tgattatagt 180
 aaacgtgtag ggaaggtta ctactaccac agtttatcag ataggaaata tgaaaataca 240
 atgccccttg aagaagctat caggacggcc ttagcatcta atttcccaa actcacagat 300
 aattggtttt tcgatatctt aaatagtttt gtcaataaag atacagttga gaaagctaaa 360
 ttagacgtaa ttatgaaggt acttaaatagt attttttaca aaaaagaata tcgctattac 420
 aaccataacc tgtcagcaat agccgaagct aaaatggctc aacaagaggg cttaccttc 480
 tattccggtg atgttactga 500

<210> 673
 <211> 568

<212> DNA

<213> Streptococcus pyogenes

<400> 673

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tccaagccaa cttcacagat ctagtttagt taaaaacott caaaatatat attttcttta      60
tgagggtgac cctgttactc acgagaatgt gaaatctggt gatcaacttt tatctcacga      120
tttaatatat aatgtttcag ggccaaatta tgataaatta aaaactgaac ttaagaacca      180
agagatggca actttattta aggataaaaa cgttgatatt tatggtgtag aatattacca      240
tctctgttat ttatgtgaaa atgcagaaaag gagtgcattg atctacggag gggtaacaaa      300
tcatgaaggg aatcatttag aaattcctaa aaagatagtc gttaaagtat caatcgatgg      360
tatccaagc  ctatcatttg atattgaaac aaataaaaaa atggtaactg ctcaagaatt      420
agactataaa gttagaaaat atcttacaga taataagcaa ctatatacta atggaccttc      480
taaatatgaa actggatata taaagttcat acctaagaat aaagaaagtt tttggtttga      540
ttttttccct gaaccagaat ttactcaa      568

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<210> 674

<211> 597

<212> DNA

<213> Streptococcus pyogenes

<400> 674

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agcattaggt ggatttggtc ttgctaacc agtatttgcc gatcaaaact ttgctcgtaa      60
cgaaaaagaa gcaaaaagata gcgctatcac atttatccaa aaatcagcag ctatcaaagc      120
agggtgcacga agcgcagaag atattaagct tgacaaagtt aacttaggtg gagaactttc      180
tggctcta atgtatgttt acaatatttc tactggagga tttgttatcg tttcaggaga      240
taaacgttct ccagaaattc taggatactc taccagcgga tcatttgacg ctaacggtaa      300
agaaaaacatt gcttccttca tggaaagtta tgcgaacaa atcaaagaaa acaaaaaaatt      360
agacactact tatgctggta ccgctgagat taaacaacca gttgttaa atctccttga      420
ttcaaaagc attcattaca atcaaggtaa ccctacaac ctattgacac ctgttattga      480
aaaagtaaaa ccaggatgaac aatcttttgt aggtcaacat gcagctacag gatgtgttgc      540
tactgcaact gctcaaatta tgaaatatca taattaccct aacaaagggt tgaaaga      597

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<210> 675

<211> 553

<212> DNA

<213> Streptococcus pyogenes

<400> 675
tcatactgat ttctacttat ttcacctatc atcaaagtga ctctaagaaa gacatttcga 60
atgttaaaaag tgatttactt tatgcataca ctataactcc ttatgattat aaagattgca 120
gggtaaaattt ttcaacgaca cacacattaa acattgatac tcaaaaatat agagggaaag 180
actattatat tagttccgaa atgtcttatg aggcctctca aaaatttaa cgagatgatc 240
atgtagatgt ttttgatta ttttatattc ttaattctca caccggtgag tacatctatg 300
gaggaattac gcctgctcaa aataataaag taaatcataa attattggga aatctattta 360
tttcgggaga atctcaacag aacttaaata acaagattat tctagaaaag gatatcgtaa 420
ctttccagga aattgacttt aaaatcagaa aataccttat ggataattat aaaatttatg 480
acgctacttc tccttatgta agcggcagaa tcgaaattgg cacaaaagat gggaaacatg 540
agcaaataga ctt 553

<210> 676
<211> 504
<212> DNA
<213> Streptococcus pyogenes

<400> 676
ataatctttc atgggtacgg aagtgtaaaa tcagatagtg aaaatattaa agacgttaag 60
ctacaattaa attacgcata cgaaatcata ccagtagatt atacgaattg taatattgat 120
tacttgacta ctcatgattt ttatattgat atttccagtt ataaaaagaa aaatTTTTca 180
gttgattctg aggtcgagag ctatattaca acaaagtta cgaaaaatca aaaagtaaat 240
atTTTTggtc ttccgtacat atttactcgt tatgatgttt attatatata tggTggggtt 300
acaccatcag taaacagtaa ttcggaaaat agtaaaattg taggtaattt actaatagat 360
ggagtccagc aaaaaaact aataaatccc ataaaaatag ataaacctat ttttacgatt 420
caagaatttg acttcaaaat cagacaatat cttatgcaaa catacaaat ttatgatcct 480
aattctccat acataaaagg gcaa 504

<210> 677
<211> 645
<212> DNA
<213> Streptococcus pyogenes

<400> 677
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agcaaaatgt aaaagtctca ttaaatagtt attctaaaag agcagcgttt agaactactc 120
 catttggat ctttactgct attaatacag ttgatttgac aaaggggaacc acttctaag 180
 tacaaaaggt tagttttatt aaaaaagcag tcccagatta ttcatggata tattctctag 240
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 aatatgaaga gttaatagat gtatttataa ataattatcc agatatagtg tcagacatgc 480
 tagagtcata tatacacgac ttagttacaa atgatttttt aatttcagat ttaagaccac 540
 caattttaa tatcaattcc ttagattatc tactatctaa attagaagaa ggaacactat 600
 gtactgactt aactacttta aagaagatga ttgaagatta caacg 645

<210> 678
 <211> 703
 <212> DNA
 <213> Streptococcus pyogenes

<400> 678
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 cttttttgat aaatctctga gtcatgggtg gccatcatta atcttaatgt atagttcact 120
 atataaagtg acaaaagatg agagatatct aacattctcc aacatatagc ttgagaaatt 180
 agtagacata atctctagag atggtataga atctcctctc ctctatgctg gcactgcagg 240
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 atccttaaat tgtcttctaa aagaacaaat taaagacaaa ttggtagtaa gtttttctaa 360
 tattgagaaa ggaattattg agccatatga ttatgatatg gttaacggat ttagtggaat 420
 aactaattac ttactccttg aacaagaatt tttttctgta gagttaaate aaattggaaa 480
 ttatcttttg aaatatattg agacaatttt aaataaggta actaattggt ctgaagatag 540
 agaagctgaa tttgatctag gaattgcaca tggaattact ggtcctatgc taatcctagc 600
 aaaattaaaa tcagaaaaaa ttttgagtgt agaagtagga gatatactga ataaagctat 660
 aaatttaatg tttttattta gaagggatga caaactatgg cct 703

<210> 679
 <211> 593
 <212> DNA
 <213> Streptococcus pyogenes

<400> 679
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 gtaaattctg gtttgtaaa taaattagaa ttagattcta ataagtattc tgtttttta 120
 tcaagggatg ttgatttaaa aaaggtagaa tatgccagag ttctattgat agctcttata 180
 aatctaataa ttagtatgat tttaaagctta atgcttattg taattagttt tgcctacct 240
 actccaagtc ttattagtat aggtaggata ctattaacta tcttgtaat ttggttgact 300
 acactatggc aaatcccgtt tttttatgg ctatcaagaa aaattaatgt gtattttgct 360
 atgattatta atattatata tccactaatt attggtacaa gtttttctct cttaaataaa 420
 tggattttgt tcccttatga ttggtcgttg aagttgcttg agccaatgac aagaatgaga 480
 ataaatagta taccttttgg agcggagttt gttccagact actcacagat ttttatatca 540
 ttgttcctag gaattgcttt tttcatctta ctgaccaatc tatttgctat ctc 593

<210> 680
 <211> 544
 <212> DNA
 <213> Streptococcus pyogenes

<400> 680
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 gtaagacaag tggttctatt atttttgaag gtagagaatg gtcacgtcgg gatctgcgaa 120
 aaatcgggag tattattgaa gaaccaccac tttataaaaa tttgagtgct tacgataata 180
 tgaaggtagt tacaacaatg cttggtgtht cagaaagcac tatacttcca ttattaaata 240
 aagttggtct aggaaatatt gacaagagac cagtaaaaca attttctctt ggaatgaagc 300
 aacggttagg tatagctata tctttaataa attcacctaa actacttata ttagacgaac 360
 ctactaatgg cttggacca attggaattc aagaattaag ggaaattata gagtcattha 420
 aatcagaagg aatgacaatt atgatttcaa gccatatact gtcagaagtt gaacatctag 480
 ctgattttat tggatttatc tatgaaggaa agattattct ggaaaaagaa tatgacggct 540
 ctga 544

<210> 681
 <211> 548
 <212> DNA
 <213> Streptococcus pyogenes

<400> 681

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 ccttttggtg caagtattgt gtgcattcaa ctaaaaaatt tagaagaatc atctggaaaa 120
 tataaatatt tattgggtta ctcacagtcg aattataaac catttattgt agaattagta 180
 tttctatggt tatgctattg tatagtatta attatttcaa ttactatatt tattctttta 240
 ttgaaaacta ttggtataaa tgtatctctc agactactta ttttgaatag ttaatttat 300
 atcatttttg cctatgtaac ctatctgac aatcatatta ttagctatat atttagtaca 360
 ggtgtggcat taggtatttc aatggtaggt gttattgctg cagcattttg tgaaacgagc 420
 cttggtgata aggtatgggt tcttattcca tgggcatggc ttttaagaat atcagatact 480
 ctatataacc aacagaaaat ggcaattggt ccacttattg ttatatTTTT tgtttcatgc 540
 acagtagc 548

<210> 682
 <211> 311
 <212> DNA
 <213> Streptococcus pyogenes

<400> 682
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 aggtcttgct taatctgaac aacaacgata tagagaaccg ccgtttgcc agatatgact 120
 atgccaagat gaacttgact gcagctataa aatagaaga agttgagaaa gagattgaaa 180
 cttctcaaaa tgaacttaat atatccatag atgagtatga atatctagta agaaggttgg 240
 aaaagtttg agagatcttg agtगतagca aaattatoga tacttctoga aatgaaatac 300
 aatgggagta a 311

<210> 683
 <211> 521
 <212> DNA
 <213> Streptococcus pyogenes

<400> 683
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 tcttttcaa agttaaata agtgacatct cataatgtgg gagaagaatt ttatattaaa 120
 gataaacagt caatcaaaca gttgaacaat tatatgaaga cattgggatt agattatggt 180
 gtttttgata gaaaaacaga taaagctatg gaaggaaaat attatctaa agaattttct 240
 ttatttaacg aagttgcaga agaaaaaat aatctgactt ttaattctgt acattatgat 300

ttatatacta atatcaatta taatattgtc ataagatata atgagatacc ggagttttct 360
aaccattacc ttagaaatgt ttcataaac atgttgacat tttatattct gggaatagga 420
acgagtatca gcattgtagt tgctttaaca cggtttghtaa aagaaatttc tttgaatttc 480
aaggaaatca agaagttagc aaataaaatg gggatagaag t 521

<210> 684
<211> 548
<212> DNA
<213> Streptococcus pyogenes

<400> 684
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ttaccaatag tttttgatga ttttaaagga tatgatttga tcttattgga tatcatgatg 120
cctaataataa gtggaactga gttttgttat aaaattcggg aagaagtcca ttctccaatt 180
atTTTTgtta gcgctttaga tggcgataat gaaattgtcc aagctttaa tataggggga 240
gacgatttta ttgtgaaacc atttagctta aaacaattcg tagctaaagt taactotcat 300
ttgaagagag aagagagagc aaagataaag aatgaggctg aggagagagt gaagcgcagt 360
ttccaccta tagaaatcta tctagaggaa cgtatgttat atattgataa acagccgta 420
ttcctgactt atagagagta cgaaatttta gaattactgt cacgtcatcc gtataaagtt 480
ttcacaaaag aagagatata tgaacaagta tatagcgatg aagcttcagc attgtttcat 540
tctatttc 548

<210> 685
<211> 543
<212> DNA
<213> Streptococcus pyogenes

<400> 685
ttctccctac tgggtgtctc aattgctatt agcttatttc aaggatttt acccattttt 60
agtatgctac tagttcaaaa aatgttaaac attataacga ctgatataaa aaattttcac 120
acattgatga ttgcttttat ctcatatatt gctttaacat tattgacaat tataatagga 180
gaagttgata gttatattga tactaaatta cagatacttc ttcactataa gatgaaccat 240
ttagttatgc agaaaactgt aaagttaaca ttggctgaat ttgagacacc agaaatctat 300
gatgatatca ctgcataca aatcaata tcttataaac cttttcaaat atataagtca 360
attatttctg tattatcttc gttagtatca ttaatttctc catttggtat tttattaaat 420

tggagatat caatthttcc actthttactt atccttccta tcgthttctat atatatctac 480
 ttgaaaattg gtaaaaatga atttgagata ctatataaaa ggagtagcga tgagagagca 540
 aat 543

<210> 686
 <211> 512
 <212> DNA
 <213> *Streptococcus pyogenes*

<400> 686
 agcgatcctt atcttacttg tttttgttgc tttttacttt atccatcttg cggtgcggtga 60
 ttaccgaaat gcacgtatta ttccgatgat gagccataaa atccgagact tgattaatgg 120
 tcgctatact gatataatcg acgaaaaagc agacattgag ttaatggagc tttcagacca 180
 gttaaatgac ctgtcagatg tttttcgctt gacgcatgaa aatcttgccc aagaaaaaaa 240
 tcgcttgcca agtatttttg cttatatgtc agatgggtga cttgctacag accggtctgg 300
 taaaatcatc atgattaacg agacagctcg caagcaatta aatttaagta aagaagaggc 360
 actaaagaaa aacattacag atttgttaga aggtgatact tcatatacct accgtgattt 420
 ggtatccaaa acaccagtgg taactgttaa tagccgaaat gatatgggtg agtttgtctc 480
 attacgcttg cgctttgcgt tgaataggag ag 512

<210> 687
 <211> 520
 <212> DNA
 <213> *Streptococcus viridans*

<400> 687
 acgtcctctt aacagtcaca aggggacttt tggccgtgtc cttttgattg gcggcaacta 60
 cccttacggt ggtgctatca tcatggctgc cttgcttgt gtcaatagcg gagctggttt 120
 ggtgacggtt gcgaccata aggacaatat cacagctctg cacagccatt taccggaagc 180
 tatggctttt gatatggttg aaaaagatcg tttgtcagag caataaacag cagcagatgt 240
 ggttcttatg ggaccgggct tggcagaaga tgacttggct caaacaacct ttgatgtggt 300
 ttggcaggct atcgaaccaa aacagacttt gattattgat ggctctgcta taaatctatt 360
 agccaaaaga aaaccagcta tttggccaac caagcaata atcctaacac cccatcaaaa 420
 agaatgggaa agattgtctg gactgactat tccagaacag atagaagcag caacacaaac 480
 agcactagct cattttccaa aagaaacat cctagtcgca 520

<210> 688
 <211> 463
 <212> DNA
 <213> Streptococcus viridans

 <400> 688
 atcaggctgt tatgctctg attagacaaa aggatgaaca agttaagaaa ctgcaaagat 60
 cagttatfff cagacagcct gaaagactct atgatgctta tgttcaaaaa ttggatcatt 120
 taagaacaca tttgttgacc aagggtcggc aggtttatga tgtttatgat agcaaggaac 180
 atttgctgag acaaagattg ttgtccttta atttatcagg gtgtattcag cgctatcaag 240
 cacaattaa acaagatcag cgtttattgt taagccacat gagcagtcaa tatgatagta 300
 aattagcccg ttttgaaaa gcacaagatg cgctttgtc actggatagc actcggattg 360
 tggcgcgtgg ctatgctatt gttcaaaaag ataatcacat tattcaatca acccaacaga 420
 tcaaaaaagg agatcgcttg catcttgaaa tgaagatgg gca 463

<210> 689
 <211> 360
 <212> DNA
 <213> Streptococcus viridans

 <400> 689
 aattgtgaac cagttagaaa ccggtgaaat tcctcttgaa gaagctatta ctcaattcca 60
 aaaaggaatg gcgctttcta aagatttgca gaaaaccttg gagtctgctg aaaagacctt 120
 ggtcaaagtc atgcaggctg atggcagtga agcagaaatg gacgagttgt gaaagataag 180
 attaaatcca ttaatcaggc tattaagcat tattatgcgc aaactcatgt gtctcaggat 240
 ttgattgaag cggctttgta ttctgttgat gcaggcggta aacggattcg tcctctctta 300
 ctattggaaa tcttgcaagg ctttggtttg gtacttacag aagctcacta tcaggtggca 360

<210> 690
 <211> 463
 <212> DNA
 <213> Streptococcus viridans

 <400> 690
 gaagaaacgt gaacgattag aattaattaa aaaaattggt ttagaaaatg aaattgaaac 60
 acaaaaagaa ttggtcaaac ttttagagaa cgaaggctta caagcaacgc aagcgacaat 120
 ttcccgatgat attaagtggg tcggtatcat taaagtacca gttcaataa gtcgctatat 180
 ttatggcctt tctaaggaaa taagcaaaaa agaagagtca acacaaaaac cagctgaaaa 240

agcagttaag tttatttcag atcaggtggc aggttttagag catctcattc atattgatgt 300
 tgttcctgga aatagctatt tattgaaacg ttttttacta gagagatttg aaggacttat 360
 ttttagcttg ctggcagatg atgacagttt gcttttgatt gttaaaaatg ctaaagatag 420
 tgatagaatt cgtcaagaaa tcaaatcttg gatggccaat taa 463

<210> 691
 <211> 412
 <212> DNA
 <213> Streptococcus viridans

<400> 691
 agatatgatt gcaacaattg aaaatthttgc tcaagaacag gcagaatttc cggtttataa 60
 tatttttagga gaaatccata cctatggaga attaaaagct gattctgatt cgcttgcagc 120
 tcatcttgat cagttagatt taacagcaaa atcaccagta gttgtctttg gaggacagga 180
 atatgccatg ctggctagtt ttgttgctct gacaaaatca gggcatgcct atattcctat 240
 tgatcatcat tcagccttag aacgtattga ggctatttta gaggtagcag agccaagttt 300
 agttattgct gttgatgatt tccaattga caatcttcaa gtcccagtaa ttcagtatag 360
 tcaattagaa gagattttta aacaaaagct atcttatcaa atcaatcatg cg 412

<210> 692
 <211> 560
 <212> DNA
 <213> Streptococcus viridans

<400> 692
 gtgaaaagtc gcatcaaate tttgccttgt ttttctatat catttgcaa attttctgtg 60
 tctatagtta taaatthttat agaaaatcac gggataataa gtggatthtt tatcttcatg 120
 tcttcatgtc tatcttacct ttatctttgg taaagattac tctgcgatt tggacaaate 180
 aacaatctth atttggthtt ttgggtatat cctatcttac ctttcgttca gtaggtatga 240
 ttatggaaat gcgagacggt gttctcacgt catttacatt ttgggaatth atccgthttta 300
 tgctgthttat gccactthtt tcaagtgggc ccattgatcg tttcagaaga tthaatgatg 360
 attatgagaa gattcctgat aaagatgaat tgctagatat gttggaacaa tctgttccact 420
 atatcatgct tggththttc tataagthttg ttttagcgca aatattggga acaatgattt 480
 taccgggthtt gaaagaaatg gccttgcaaa aaggtggthg gttcaattgg ccgactthtag 540
 gagtcatgta tgthttatggc 560

<210> 693
 <211> 250
 <212> DNA
 <213> Streptococcus viridans

<400> 693
 cagctgttgc agaagattta gccaaaattg caggtgttga cttgcaggaa tatggtttgg 60
 ctatgcttaa ggctgttacc aatttagcaa gtaaaacggc tgcacaactt gttgatattg 120
 atgctaaaac atttgaactt aatggtagtc aagtacgtgt agctcaagtc aatacggttg 180
 atatcaatga agttttggaa cgtcaaaatg aaattgaaga agccattaaa gcatcacaag 240
 cagctaattg 250

<210> 694
 <211> 508
 <212> DNA
 <213> Streptococcus viridans

<400> 694
 ttctcttaaa tcaaacagga agtatagcgg atcgttatgc agctaaacgt ttattagaca 60
 ttaaaccgag ttcgaatttg caaggtatga taaaaaaaaat tgcggctggt aaaaccttaa 120
 atagctttga tagggcaagc ctgcgctta ttaagagttt cttgaaaaa gaagacgctt 180
 tatttgggaag tctgacctt agtgataatt atgaacgtcg tgtattgccc catgtcaaaa 240
 aattgcccaa gcacttttct tatggaacct taagtcaaat tgctagcaaa aatggcaaaa 300
 ggttaacaaa aacaaatcaa tttgaaatta atgatcattt ttataataaa cgtattaaag 360
 gacaattgaa aagactcaaa ggcttccaaa agcaactgtc ttatttacag tctccagaat 420
 acaatgattt acagctggcg ttaactcaat tagcaaagtc aaagacctt gtcataattg 480
 ttattccgcc ggttaatgcc aaatgggt 508

<210> 695
 <211> 300
 <212> DNA
 <213> Streptococcus viridans

<400> 695
 aattgttctc ttattggctt tctttggtt tcaacaaggt gttgatgcgc aaagcaata 60
 ccactatagt caagaactaa attactataa tggtaatgcc atggaacttc gtaatggttc 120
 taatgggtgt atgtttaact gtaattttgt ccctggaaat gtcggcttta ataacggctt 180

gatgagtctt aaaattgaca gtgatggctg tggcggctac actgggggcg aatggcgtag 240
taaagaacgc tttggctatg gtcttttcca agtaaacatg aaacctatta aaaatccagg 300

<210> 696
<211> 266
<212> DNA
<213> *Streptococcus viridans*

<400> 696
gtcttggcgc gagttttaa ccaattcaat gttttcttga tgggttagct cgtgttttg 60
gtactgacgg tcagttctcc atcttcaatg ctagcggcca caatgtctgg catcttaagg 120
acaatgcttc tatctgctaa agtcagtggt aacagttcca tacctttctt ttctgctgta 180
gctgtttcat ctattgtaga taagtgttgt attttcttaa ctttagccaa agctttatcc 240
acacgcccct gctcaaaagg cttcaa 266

<210> 697
<211> 400
<212> DNA
<213> *Streptococcus viridans*

<400> 697
cattgggtcg atcagtcaga ccaacggcat caaaattagt atgctgctta atgatattac 60
acactttagt agctgattgc tgactcagtc cctgtcttaa ataaggaagg gtttgctgcg 120
tcaaatctaa aacatcccga gtctgaacag ctctcagctg tctttcattg gataagtagg 180
tcttgagaat agctagaaat aaggtcgaac ctagactggt aagcaacatc ataggaatga 240
aatcagttt aaccaaacc cagccagtaa agaaaccgac aaagagcatt tgaatacttt 300
cagcaataat gctgataaca atgacctgcg aagtagatgg ataaaggta ttagttttta 360
attgatcacc cagtcgacca ctaatatatc ctaccaaagc 400

<210> 698
<211> 381
<212> DNA
<213> *Streptococcus viridans*

<400> 698
tgattaaagg agttaagttg gtgaattgac ctgaaaaaat tgtttcaagt cccttaaatt 60
tcgttacatt taagttgtca aattccaagg caattttaga ataattcggt ttaggcaata 120
aggtcttaat tttttccaaa ggattttcaa aatcaagata gccagtcacc gaaatatcta 180
atatactttt tgctcttaaa gcatcaagtt caggtaaaaa aagcagagtt tcttgatctg 240

caaagaggaa gaggaacata aggcgttcat gcggatcact ataaaaacct gttaaataat 300
 taatggagac aggatctgaa aggacagcag cttcaatacc ttgctttttg agtttttgaa 360
 caatctgtgc taattttgac a 381

<210> 699
 <211> 505
 <212> DNA
 <213> Streptococcus viridans

<400> 699
 agaaaaagt gactacgaaa aagtaacagg acttgtaat tctacagaat cttttgggtc 60
 tgtagacgga cctggtatac gctttgttgt ttttatgcaa gggtgccaaa tgcgttgca 120
 atattgccac aatcctgata cttgggcaat gaagaatgat agagcaacag aaaggactgc 180
 aggagatgtc tttaaagaag ctttacgttt taaagatfff tggggagata caggaggtat 240
 tactgtttct ggtggtgaag caacgctcca gatggatfff ttaattgccc tcttttcttt 300
 agcaaaagaa aaggaattc atacgacctt ggatacctgt gctctgactt ttagaaacac 360
 accaaaatat cttgaaaaat atgaaaagt aatggctgct actgathtag tattgttaga 420
 tattaaagag attaatcctg accaacataa aattgtcact ggtcatagca ataaaactat 480
 tttagcttgt gcgcgttatt tatct 505

<210> 700
 <211> 407
 <212> DNA
 <213> Streptococcus viridans

<400> 700
 tgatgctgag tacaaggatt tatccaataa tctcagcgaa tcttactata ttttagaaga 60
 tgtagcaaaa cgtctagaga ctatactgga tcatatggat tttgatgcca atactttggt 120
 taaacttgaa gcacgtcttg atgttatcaa caccatcacg cgtaagtatg gtggttcagt 180
 tgatgatggt ttggcttatt ttgacaatat cagtaaggaa tacaatcatt tgacggtaaa 240
 tgacctcgct tttgatgata tggaaagaga actaaaagt ttggagcgct cactattaga 300
 agcagcagct caattgagtc aaaaacgcca tgccattgcg gaaaccttgt ctcaggagat 360
 taagcaggaa ctaaaagatc tctacatgga taaggctgat tttaaag 407

<210> 701
 <211> 250

<212> DNA
 <213> Streptococcus viridans

 <400> 701
 cggcagacaa gtcagtcatt actcagcctg ctacaacct gacagctatt aaaaagattt 60
 tagagagatt agaaattggc ggtcgtttgg caattatggg atattatggg catgagggtg 120
 gcgataagga aaaatatgcg gttctgaact ttgttaaaga gctagatcaa cagcatttta 180
 cagtcatgct ttatcaacct ttaaatcaaa taaatacccc accctttttg gtgatgatag 240
 agaaattata 250

 <210> 702
 <211> 213
 <212> DNA
 <213> Streptococcus viridans

 <400> 702
 gtgatattat ccaaacatt ctcaatgaaa gattttcgcg gattcctggt tacgatgatg 60
 ataaagataa gattattgga atcattcata ctaaaaattt attgaatgct ggtttcaagg 120
 aaggttttga tcacatcaat ctctcgcgta ttttgcaaga gccgcttttt gtaccagaaa 180
 ctattgttgt aatgacctt ttgaccgctt taa 213

 <210> 703
 <211> 615
 <212> DNA
 <213> Streptococcus viridans

 <400> 703
 attggacttg tgtcagcttc gatttcaagc ctattttttg tgtccattgc gagcagtggg 60
 atcgtatttg ctcaagaaaa tgcagctggt cactacaaat atgtgacgga tacagagcta 120
 agtagtcaag agaaggactt gattgtaaag ggcattccta aaattacgga agatagttag 180
 agcacctatt atctagtcta ccgatggat gagaaaagctc agctgggtca gttgcccaat 240
 acaggtgggc agaatagcct tactagtgtt ttaactggtg gagtcttagc ttcgattggc 300
 cttcttattt ttgtcgtatc gaaaaagaaa ggcaaaaaga aagcactggt gaaagtgtgc 360
 ttgataacag gaatgggcag tggtttggct tcttcggttc atgctatcga aatcaactt 420
 ttgctccaat acaatcagga ataccaatta tctcaaggag atagtctgcc tttgccacgc 480
 gccctgtcag gatataccta cctaggetat attaagcaag acaaagagat taatcagcaa 540
 gaaactgctg ctagggatca gaaatttgac tacacggttc agcctcattt tcagaccaat 600

gaaggtagac aaagg 615

<210> 704
 <211> 541
 <212> DNA
 <213> Streptococcus viridans

<400> 704
 gaaggcaatg aggagactta ctatcttgtc tacaggttaa actcaaatgc tggatcaaaa 60
 accttaccga atacaggcga cagtaacaat tccaatacta tgatgacggc tggtttgta 120
 acgacgatag gattggttgt tttgttggtg tcgaaaagaa aggttaaaag caagttccta 180
 ctgactgttt tgggtggggc tagtgtcggg ggaggttga tactatccgt caatgcgctg 240
 gaaaatggga tcttgctaca gtataatgcg gaatatcaag tgcggctgg ggaaagtctg 300
 ccgtcaccaa gtgaaatttc aggctatacc tatgttggtc acattaaaga agaatcgatt 360
 cagaaattat tagacaataa gattcttaac aatcagcaaa atgctaactc agataaagaa 420
 actttaaac aaaataagaa gctagattat tctctttctt ttgataagaa tgggctgaaa 480
 aatcaaacgc ttggcgtcaa tacaattgag cctcaagatg aagtcttgtc tggccgagta 540
 g 541

<210> 705
 <211> 563
 <212> DNA
 <213> Streptococcus viridans

<400> 705
 ttttattggg aggttttctt tattatatta ctaatcctat tgtcactttt ttagaaaacc 60
 gttttaaata taagcgtatt tgggggatca ctcttatttt tgctgtattg ctttccttgc 120
 tggtttttcc tattaccagt ctgattocca atttgattaa tcagctaaca gatcttattt 180
 cagccagcca aaatatttat gtgggtttgc aggatttatt caatgaatgg aaaagcaatc 240
 ctgcctttaa aaatattgat atccctgttc ttttaaaaca gttcaattta tcttatgttg 300
 atattttgac aaatgttttg gatagcgtga cagttagtgt ctcaagtatt gtttatatga 360
 ttacaaatac ggtgatgatt ctggttctta caccggtat tcttttttat ctctcaagg 420
 acaaagatgg tttaatgcc atgtagatc gtactatatt gaaaaatgat aggcataata 480
 tcagtcaatt actgaatcaa atgaacaaaa ccatttctcg ttatattagt ggtgtagcta 540
 ttgatgctgc cttcatattt gtt 563

<210> 706
 <211> 500
 <212> DNA
 <213> Proteus mirabilis

<400> 706
 tgaaaaagtt attattatct gcaattatta cttcagcaat ggccataatt gctacacctg 60
 ccctagcaga agatactggt acaccagcac caacagaagt tacagttaat ggtggtacta 120
 ttaactttga aggttctgtc gttaatgctg cttgtggtgt tgatagtagt tcaagtaacc 180
 aaactgttcg tttgggtcaa ttccgtgtcg ctgaattcac taaaaaagggt gatgaaacag 240
 gacgtattcc ttttagcatt aaattaaata actgcgatat tactgtttca tcattagcag 300
 caattacctt taacggtaca gcttctgatg gtgatgcaac tgcattcgca ttacaaggca 360
 gtggcgcagc aaccaatgta gcgttaaaaa ttaccgattc aagcagcaaa aatgttgttc 420
 caggacaacc ttcttcaact caaaaattaa tcgaaggatg aaaccaatta aattataacg 480
 cttctcttat ttccactgat 500

<210> 707
 <211> 346
 <212> DNA
 <213> Proteus mirabilis

<400> 707
 agatgaaaag cttgctaagc aaaatacact acaaattgcc atccagagtc ggataaagct 60
 tttctaccgt cctagtggtat tgtccgctta tactgaaaaa tatgccaatg aagtgacttt 120
 ttctataaaa aatggggagt taattgcccc taatccaaca cttatcata ttactatggt 180
 caatttagct gcagccgaca gtcaacttcc ttcaagtatt atgattaacc cattttcaca 240
 attaacatta ggaaaagta atcagaatgc taataccatt tcattccaaa ccattaatga 300
 ttatggcgca cagactcctg ttttaaaaaa agaaatcggt catta 346

<210> 708
 <211> 563
 <212> DNA
 <213> Proteus mirabilis

<400> 708
 tggctgactc tcctgatgcc gtcaccgatt taagttatth tgaagcaggc aaccgcatta 60
 aaccgggtga ttatcttctt gatattgttt ttaatcatga gtatctgcgt agtgaaaata 120
 ttcatthtat tagtcaagat aaccatgtta ttcttgttt aatcgagat tattatcaat 180

cactcgggat caatattaa ctattgctg attttgagaa attctcggca aatgaatgta 240
 ttgatattga aaaaatcatt ccagattctg ttgttaatta tgatattgag aaacaagctt 300
 taaatattca agtcctcaa gccgcgtag atttgaaagc acgcggttat attccaccag 360
 aaaaatggga taacggtata acagcaggta ttttaacta caccttagt ggcgctaata 420
 gctggggaaa ttctcataat aatagctact acttaaatct acgtagtggg atcaatattg 480
 gtgcttgcg attacgcgat tattccactt ggaattcgtc aaacgggaaa aaccaatgga 540
 accatatcaa tacctatctg caa 563

<210> 709
 <211> 527
 <212> DNA
 <213> *Proteus mirabilis*

<400> 709
 atggataata agcgaacaca gcgggatatt atatttagca taatatggat tatttggcca 60
 tgtgcattaa tggctttttg gcgatataca atagctggtg agcttttgat cacccttacc 120
 ctaattttta gcattattat ttactctata actttgaggt taaaaaaaaac ggcaatgttt 180
 agtcgaaaaa cagaaacacc aaaagccgag gagcctattg ctccagttat ggcagaagag 240
 aagaagccta tgccggagca aaaattgtat accattattg ctaaaggcac tgtatttcaa 300
 ggtgatatta acgttgatgg tgatattcaa atttggggta aaatttcagg gaatatcaat 360
 gtaaaagatg gcgtgatccg tgttatgcat gcaggccaag ttgaagggga attgacggcg 420
 ccagacatca ttattgatgg ttttgtaaa ggtattttg cgcgaaacaa tcttgatatt 480
 ctagagcatg gtgaactacg tggcactagt cgttgtggca gtatgtc 527

<210> 710
 <211> 431
 <212> DNA
 <213> *Proteus mirabilis*

<400> 710
 ttatattgaa aactgaagc aacggctgga tgcgattaat caactcaggc tggaacgtgc 60
 atttgcatcg atgagtgatg tgtttaaaca ggtgatggt ttaattcctg ttttactgca 120
 ttaccaccac cctcagttgc caggctatat tcaaggaaat gtccctcatg gtacatgttt 180
 ctttgaacct gatgacgtgc aacgtcaatg ggtaataaag ctgactaatg catcatgtga 240
 tgagccaatg aatggataca ccagcggaga gttacctatt acgggtatct attcagatggg 300

aagtacttcc tcgattgggc aaagtcactg ctccgatatt gatatttggg tctgtcacca 360
 atcttgctg gaccaagatg agcgtgctgcg tttacaacgt aaatgtttac tgatagaaca 420
 atgggcagga g 431

<210> 711
 <211> 528
 <212> DNA
 <213> *Proteus mirabilis*

<400> 711
 cgctattaac cttgctgaac gtggtatgag tgtcactatc ttagaaaagg gtcagattgc 60
 cggtgagcaa tcaggccgtg catacagcca aattattagt taccaaacaat cgccagaaat 120
 cttcccatta caccattatg ggaaaatatt atggcgtggc atgaatgaga aaattggtgc 180
 ggataccagt tatcgtactc aaggctcgtg agaagcgtg gcagatgaaa aagcattaga 240
 taaagctcaa gcgtggatca aaacagctaa agaagcggca ggttttgata caccattaaa 300
 tactcgcac attaaaggtg aagagctatc aaatcgctta gtcggtgctc aaacgccatg 360
 gactgttctc gcatttgaag aagattcagg ctctgttgat cctgaaacag gcacacctgc 420
 actcgtcctg tatgccaaac aaatcgggtg gaaaatttat accaactgtg cagtaagagg 480
 tattgaaact gcgggtggta aaatctctga tgtggtgagt gagaaagg 528

<210> 712
 <211> 409
 <212> DNA
 <213> *Proteus mirabilis*

<400> 712
 ttgttgcaat acagccatca tgcttttaac ttgagagtta ataaatgtca catctgccag 60
 atatttaacg ctattatcgg gtacgtacaa attactccgt tccatatcca tatcgaccgt 120
 gttaccatcc atcgatgttt gatgaggaac ccgataaagc aaatcagcct ctaagcgata 180
 acccggctta ataggaatat gccgttctga tgtcattggt agttgcaatc catgactacc 240
 agtacgccg ttttccatgg ttttttcaa ctacgtcgcg aaatcaatat cccgagcttg 300
 gaagcctggc gtatcagcat tagcaatatt tgccgcaaaa atttcttggc gtttattacg 360
 tagtgaaagc gcttcttgtt gaaaatgaaa cgtattttgt aatttatcg 409

<210> 713
 <211> 513

<212> DNA
 <213> Proteus mirabilis

<400> 713
 aacttttagcc ccactactat cagtaatatt gactgtaage gtatctattg gactaaagga 60
 ttcaaaacca aaggcgctgg cgaagatatt ttcattatca ggatctggcg tatcagcaga 120
 tcttaataac ggatctaatt tagtatcagg cgttttatct gtatcgatat ctgtatctgc 180
 atcagatcca gcgttttcac cattattact cttatcaacg tagatatcat taccggcaat 240
 catcaccata tgattaacca atgaggtcgc acgtaatgcc tgactttggg caatttggcc 300
 aacaatagta ttgactgttt tatttagcgt ctctatccct tcaaccgtag aaatctgtgc 360
 taactgtgac gttaaactcat tattctgcat tggattggg ggatcttggg ttgcatctg 420
 cgtgataagc aacgtcagga aattaccttt aatatcatca ctccccctt ttttagtgtg 480
 gtaggacgaa ggcgcttccc cgataatggt att 513

<210> 714
 <211> 404
 <212> DNA
 <213> Proteus mirabilis

<400> 714
 actccgccag accttagatc ttcagttatc acagctcaat accattgagg gtattttacg 60
 tgctgagcaa cagttattat gtgcaggaag tattgatatc aataagctgc atgaaataac 120
 tgaacagaag aattttgtat taacagctct aggtcatacc gatcaaaaac gtcaaatact 180
 cagtaaacaa gttggtattg atagacccta tcaaggacag ctttttttag ctgatttatg 240
 ggggcaactg gttgatctaa cggaagagtt aaaacatctt aatcaacata atggcttatt 300
 gttagagcaa catattactc gcaatagtga aacgctgcat tttctacaga aaaatcatag 360
 cccaacactt tatggtgcag atggacaagc acagcgttca atat 404

<210> 715
 <211> 236
 <212> DNA
 <213> Proteus mirabilis

<400> 715
 gcgattctat ggctgatgca ctaaaagagc taacattgcc tcaattgggt aagttggctg 60
 aaacaaacca actaatctgt aatttccggg ttgaagacag cgaaacaata gaacaactca 120
 ctaaagaatc cagagtggat gatttgcaac aaattcatac tggatocctt ctttcttcta 180

acttgttccg tcaactatcg gaacatgata cctctgctac aaagaaacgg gcataa 236

<210> 716
 <211> 633
 <212> DNA
 <213> *Proteus mirabilis*

<400> 716
 tctaacttta attcctctgt tcctattaac aagtttttac cttcaatc aactttatca 60
 tcatttaatt gtaatataac atgaccatgc ccctggattt taccaccaag agatatacta 120
 tcatcagcga caatatgaaa aacactatta tacgacaatg atatattggt tatttctagg 180
 gttcctactc ttccatataa ataactatca tcaatattaa atgttctatc taaaatcaac 240
 gtatccgctt tcacaaatag aatactatct ttaacattaa atgatgattc attaataata 300
 gaagaatatt cataaaccat tacttttgat tgtttcgtcc catcatgagc tgttctatat 360
 aaattatcat cttgatttat atctatgtgt cctggttaa ttaagccata agactcatga 420
 tttagtgaca aagtatttat attaccatca ttataaacgt taccctcttt tgcttttatt 480
 attaaatc gactatttat tctgcctcg gcatttaatg aaaatagagc atttctatca 540
 taatcatttt tagctccaag attaaactca cttaaccca tatcaaaacg aatatattca 600
 gcatttaaat cacctttaat caagtctata tca 633

<210> 717
 <211> 628
 <212> DNA
 <213> *Proteus mirabilis*

<400> 717
 tctttactga gcttccatcc agccgatccg agttggtcac aaaccacgtg gaatgaacct 60
 attcaaaact taggtggcaa tattggtgca tggcttgctg atatcctttt ttcagcattt 120
 ggcttgctcg cttatgcaat ccctattgtg gtggtatttg gttgctggaa tgcattacgt 180
 catcaaaaaa atcgtgaata cacagatttt ttctcccttg cattacgtac aattggtgcc 240
 ttggctctgg ttcttacatc ttgtgcgcta gctgatctta attttgatga tatctacaat 300
 tttagctctg gtggggatgat tggtagctta ttagcaagg cattgctacc ttggtttaat 360
 atgctaggtg caaactggc gctactatcg gtatgggcca taggctttac gctatttact 420
 ggctggtcat ggctgacgat taccgaaaag attggtgcgg ttatcttagg tgcggttgct 480
 tttattacta atcgtggtca aaaagatatt gattatgatg attatgaaga acccgccgat 540

cctgctcagg cagatcccgga ggcgttggtc gataacaaca cccagccaga acatcaactt 600
 tctgcgcaaa tagagccaga tagtgatg 628

<210> 718
 <211> 501
 <212> DNA
 <213> Proteus mirabilis

<400> 718
 tattgagcgc attgatttac gcaccaaaaa aacagagtca gggaaagatt ttcttgccat 60
 caaccctaaa gggcaagttc cggttcttca attagataat ggtgatattt taacggaggg 120
 tgttgctatt gtgcagtatc ttgccgatct gaagccagat agaaatctta ttgccccacc 180
 aaaagcatta gaacgttata atcaaattga gtggctaaac tttcttgcca gtgaagttca 240
 taaaggctac agccctctat tttcatctga tacgcctgaa agttatctcc ctgtggtaaa 300
 aaacaaacta aaaagtaaata ttgtttatat taatgatgta ctaagcaaac aaaaatgtgt 360
 ttgtggatgat cactttactg tggcggatgc gtatctgttt acgtaagtc aatgggcacc 420
 tcatgtggcg ctagatttaa ccgacttaag ccatttacia gactatctag cacgtattgc 480
 acaacgtcct aatgtgcata g 501

<210> 719
 <211> 301
 <212> DNA
 <213> Proteus mirabilis

<400> 719
 tcatatcgct gtattacctt gatatacagc ggttaaaatc tctctagctc ctttatctag 60
 tagctcttcg gcaagagaaa taccagcttg ctctgcatct tcaggtgata ctaagcgttc 120
 gccacgtaaa atagttttac catcaggggc gccaaactaat gctcgtagcc aaattttgtc 180
 gttttgcaa attgcataac taccaatagg tacttggcac cccccctcaa ggcgagtgtt 240
 catcgcacgt tctgctttta cacaagttgc agtatctgcy tggtaaggc cggctaataa 300
 g 301

<210> 720
 <211> 507
 <212> DNA
 <213> Proteus mirabilis

<400> 720
 agcgcaaaact cttcagatac ataatacaata aatagacgct gataaacattc acattcatca 60

acaattgcac cgcggtgacg taatgttggt gcaagtagtt cgcgaccacc attgcctctt 120
 agtagtagta ctgccttggt ttctatttgt tgaagtgaag acaaggccag taggtcttca 180
 ctggtttctc caaattctgg ataactgata gaatgtgctg ttaattgctg aaactcttgg 240
 gcggtgcttt gacctattcc ataatagaat agcgtatctg gccacgattg ttgtaattga 300
 tttagttgcc agtttgcgta ccacaccgca ttttagaaa gtaaaaaaag gtaatcacc 360
 gtacttagct tatttaattt gttttcta atggaagct ctttaccgc ggctatttct 420
 attaaagggt catgaaaagc atgctttccc gcatcaatta agcgttgcgt aagttgttct 480
 cctgctgggc taggacgagt gattaa 507

<210> 721
 <211> 402
 <212> DNA
 <213> *Proteus mirabilis*

<400> 721
 aatattggtc aagctgcaa aaatccggt tttcaagta aatgatccg atattatgag 60
 caaattggtt taatacctaa ggcaattcgt actgacggag gttatcgtga ttacaatgat 120
 agcgatgtag attgttttgc ctttaccagc cattcacgtg ctcttggtt ttcaacagag 180
 caaatatcaa cattattagt tttatggaat aacagagaac ggacaagtgc tgatgtaaaa 240
 gctattgctc tttctcatat cgatgaatta aaccgtaaaa taacgcaatt gcaacgaatg 300
 acgcaaacat tatcgcatth agcacaagag tgccaagggtg ataataatcc tgattgccc 360
 attattgcta agctagtcga acccacaaca gggacagaac at 402

<210> 722
 <211> 300
 <212> DNA
 <213> *Proteus mirabilis*

<400> 722
 aaatagtggt ggtgtgttcc aagagcaacc tgactttaa gagccaccac tttctattga 60
 aggtgcagcc gatcactgga accatcgtga agatgaagat tatttcagcc aacctcgtgc 120
 actgtatgag ctattaagcg atgacgagca tcaacgtatg tttgcgctga ttgcggcgga 180
 attatcacia gcaagtaaag aaacacaaca acgccaatc gacttattta ccaaagttca 240
 tcctgaatat ggcgctggtg ttgaaaagc gattaaagtg ttagaaggga aagacgctaa 300

<210> 723
<211> 220
<212> DNA
<213> *Proteus mirabilis*

<400> 723
atgaaagcaa aaattgtact aggtgcggtta attctggctt caggcctatt agcaggttgt 60
tcttctagca acaacgcaca attagaccaa atctcttctg atgtaaaccg tttaaatacg 120
caagttcaac aactaagtag tgatgttcaa tcagetaacg ctcaagcaaa agccgcttat 180
gaagcagctc gtgctaataca gcgtctagat aaccaagtaa 220

<210> 724
<211> 521
<212> DNA
<213> *Proteus mirabilis*

<400> 724
tgcacttggt tacgagagat tttgatccct ccattcttta gctgttctgg taatagtaaa 60
caagcgatgg gacggtgaaa gcctgctaaa cgcgtatgat accattgtgg taattgatta 120
attgtctcaa tatcagatc aacaacagca acgggacgtt gaccaaattc aatatcgtca 180
atcgggacaa taaatgtttg gcgaacatta ggggtgactat ttagcacctt ttcaatatct 240
tctggctgta taccttcacc cgcactaaaa aacagattat ctaatcgccc taaaatgcac 300
cattctcttt ctttaaaaca acctctatcc cgtgttgcac accaagcacc ctgagctctgt 360
gataacggct ttaattgacc atcaaacca tctcctaag caaactatc agatttgatc 420
tggatttcat tatccactaa tctgaccgct ttacccttta atggcgtacc aactcccgct 480
ttaccatctg cgcgttttgc acaaacagta gaggccattt c 521

<210> 725
<211> 273
<212> DNA
<213> *Proteus mirabilis*

<400> 725
cagacaatgc gtttattttg tgttcactaa aagcgggtgag catatcgtcg ataaaagtga 60
gtcgtttttc tcgatcgggt aggggatca taaattcaa tttggtaggg ccatctaac 120
ggaagatgct cggttgctct tgcaataaac cgattaaata agtcgggtcg acattatttt 180
tttccaaaa ctcaataaag ccacctttgt catgggcttc aatgcgagat atacctaac 240
tcatggcgct taatcgaatc gccgcattac gta 273

<210> 726
 <211> 769
 <212> DNA
 <213> *Proteus mirabilis*

<400> 726
 aaacaataga tactttgcca cttaactttc gtattttaat aaaattagcc ccaactccctc 60
 tgattagtgg cattattatg gcaataatct caacaatgct aagtttagca ccattatgga 120
 tcatctataa aatcagccag atttgttttt caacatcacc taatattcaa caaataaata 180
 atctagttta tatcactgtg attattttta ttttacgttg gggattaatg gcaataagtc 240
 atattgccgc acatcggggt gctttttata ttcagcatca attacaactc gcaatagcta 300
 aaaaaatcag taaagtacca ttatcatttt ttgctcaata tggcagtgga aatctgcgac 360
 gtattatcaa tgatgatata aaaagcttag aaggtttttt cgcacatatg ctacctgatc 420
 tcgtctcagc catagtgact ccctttatcg ctattatatt acttttttat gtaaattggc 480
 ctcttgccctt attatctcta accccattac ccattgcttt tatggctcaa cttctcatgt 540
 tgcgtcgagc caataaacia accaatgagt ggatgaatat tcagaaaaaa attgctaata 600
 aatagggaga atatattaaa ggaatcagag aaataaaagc gtttaactta acctcccata 660
 cttttggtaa attatctcaa tctatcaatt cctctgttaa atggataaaa aataatgtca 720
 aagctagtac aggtctcttg atggatttta gtgggatatt aacagcgaa 769

<210> 727
 <211> 516
 <212> DNA
 <213> *Proteus mirabilis*

<400> 727
 cttgccgtag ttgaaggctt ttttgctact attccatata ttctactcta ttttttatta 60
 attgatcttt ttgccaataa aatcacacta gctcagttat tttattactt tttatcaata 120
 ctcttatcta ttgttctgcy tattgtcatt ggtacttata gtatgccaat gatttttatt 180
 ggtgcttata aatgatggg acaagcccggt ctaagaatag ccgatcattt acgaaaaatc 240
 ccgattggct ggttttcttc tcaacgcagt ggtgatcttg catcacggct tactgctgat 300
 ttagagatca ttcaaaatat ctggtcacat ttcttaggaa tgtttatcag tacttttagcg 360
 atgcctgctt ttctctcaact attcttagta tgggtagatt ggcaactcac ttttaattata 420
 ttattttcta ttccaatcgc tctgttcgca ttatccataa gccataaaat aatgttaaaa 480

gctgcacaac aggcagctga tgctaatagcc aatgta 516

<210> 728
 <211> 673
 <212> DNA
 <213> *Proteus mirabilis*

<400> 728
 ttaaagtaaag ctaaattccag aatgcacatc ttaaataacg atgaaatttc atcgtttatc 60
 gactaccctt ttataaaaca acgaaatatt tttttgctat caagagtcac gttacgcat 120
 attttatcat tttattttaa aatttcacca gaagatgtaa gattttcaaa aatgagtac 180
 gggaaacat ttattttaa cgaatcaaag gaaagcattt acttcaattt atcacattca 240
 aataattgtg ttgctctcgc tatttcaa atcatcatccg ttggtattga tattgaatat 300
 ttcaaccgtg atatagaaat aatagcatt atagattatt atttctcaa aaaagaaaa 360
 aaatacctat cttattttga cgagactcaa aaaaaacata atttctataa gatgtggaca 420
 ttaaaagaag cctatattaa atcaagaggc attggattat cagaagaaat cattaagaat 480
 ttagattttt atataaagag agatcaattt gataaattat attttataga acagcattac 540
 tctgctcacc tttcatatat taccaaatca atattagata gctataaaat atccataatc 600
 acatatcacc atccatttaa ctataaattc ttaacatggg gtgatataaa aagcaacctg 660
 ccacatcatt tat 673

<210> 729
 <211> 682
 <212> DNA
 <213> *Proteus mirabilis*

<400> 729
 attattctcg ccagtgtttc gacagaaaac gatcactttg atcaagagtt acctagtgc 60
 accaagatac acaaaagttc aactaccaa tggcaattaa caccttgtgt ggaacaagat 120
 cttatcaagc caacattaat atttaacat caacaacat tgccttctga aatcacagct 180
 attttatccg ctattggatg tctttctgaa cagggcgaaa atcaattaat cgttgccaac 240
 cttgcagatc ctttaattat cgccgagcag atccgcaaaa tattactgtc atcgtctgat 300
 gggtttggtg ttatcacgca acaagcctgg gcattaactg ccatagaaac ggtaaatcca 360
 gcacaacgta gtattcgaag tttattaaaa actattcaaa aagaatatag ctcaaggtta 420
 attgccattg ttgatttagg tataaatgcc tcatggctctg aattagttcc tgcttttata 480

caaatagaac aaggtaataa tgaaattatt gttcgttaacc attgctgcta cttaccacaa 540
 ttaacccac tgccctcatc ttctacgac atagcgcaga acatcatggt atccccgcgc 600
 tggcatatta ttactgggtg ttttgaggc ttaggtcgaa ttacagcaag ttggttagta 660
 aggcaagggtg ctaaactgat cg 682

<210> 730
 <211> 609
 <212> DNA
 <213> *Proteus mirabilis*

<400> 730
 aatgtaaata aagacaatgc taacctattg gtttgccat ttgctggtgc cagtaatagt 60
 gcatttaact cgtggagatc taccgatatt tcagggtaa attgtcaatt agttaattac 120
 tctggccatg gttgcagatt taaagaacca gcctttaatg atattgggtt attagccaat 180
 gaattaataa caataataa gaaatattat ccaccacggc ataattcatt attactttgc 240
 ggtcacagta tgggggcca agttgccttt gaaactgcta ttcaattaga aaaaaatggc 300
 tgggaattat ctggactaat attatcaggc tgccaagctc ctcatattca agcaaggaga 360
 ttactgagtg atttaaatga tgatgacttt attcaacaat taattgccat tgggtgatgt 420
 gatgctgaat taatcaagca gccacagttg ttaaacagc ttatgccatt attacgtgct 480
 gatttccttg ctaccgagcg ttattttttt caaaaaagca ctaaactggt ttttcatacc 540
 cctgttttat taatgatgg tagtcatgat agtgaagctg ataaaaacga agttgaagca 600
 tggcaagat 609

<210> 731
 <211> 609
 <212> DNA
 <213> *Proteus mirabilis*

<400> 731
 taaagcattc ggtattccac tttttactcg atttgatcaa ctacctgaaa aaatagatct 60
 agcttgatg gttgtgcgat cagccattgt tgggtggcgaa ggtagccaac ttgcgcaagc 120
 atttttacaa cgggggatct cggttgtaca ggaacatcct gtacatcctg atgaaattac 180
 cagactacaa tcattagcag aaaaaatgca ttgccactat atcgtaaca gcctctatcc 240
 acataataa gcaggacggt tatggataga aaacacacag aagatatatc agcaaataca 300
 acaacgacca gtgtggggac aaattatcac aagcaggcaa ttaatttatt ccgccttaga 360

tatatattgc caagcaatga aattacaccc taatgatatt acagtcacat tagaaaaaga 420
 taataccccg ctacaatttc tacgactatc caaccctact ggtgatttgc ttttatgcct 480
 acaaaaaacat ttgtcatcta acgatcctga tcagcatagc ctcgtgatgc atcatatgat 540
 attaggctgg ccagctgggt atttaactct cgctggaagt tatgggccag tagaatggaa 600
 taatgcgct 609

<210> 732
 <211> 502
 <212> DNA
 <213> *Proteus mirabilis*

<400> 732
 aattggctac tcctcgatta cgtttacgag aatggcgtga aagtataaa gcgccatttt 60
 ttttacatat taacgcctcc gcatcgggta tgcgttattt ccctcacca cttactcgtg 120
 cagaaagcga tgcaatgggt gatacattgc gtgataaatt tattcagcaa aatggttggg 180
 gattttgggc cgttgaatta aaagagactc aagagcttat tggctttggt ggattaaata 240
 ttctaatgc ccctttgcct tttaatccgt gtgttgaaat aggttggcgt attgcacaat 300
 ctcatggcg caaagggtac acttatgagg cggctttaac agtattaaaa tatgcttttg 360
 aacagttgaa actggaagaa gtcgtggcat ttaccgcagt gactaattta ccctcagaag 420
 ggggtgatgaa aaaactcggg atgaagaagt ctgaatattt tatgcatcca tctctagata 480
 aaacacaccc tttagcacia ca 502

<210> 733
 <211> 511
 <212> DNA
 <213> *Proteus mirabilis*

<400> 733
 tgcggcttta gtatttggtt ttaattctgt tgctacagct gaaaatgaaa gcctgcacc 60
 aaaagtaagt tcaactaaag gcgaaattca attaaaagggt gaaattgtta attcagcatg 120
 tggattagca gcatcttcaa gcctgtaat tgttgatttc agtgaaattc caacttctgc 180
 attagcaaat ctgcaaaaag caggaaatat caaaaagat attgaattac aagactgtga 240
 tacaactgta gcgaaaactg ccacagttag ctatacacca agtgttgtta acgctgtaaa 300
 taaagattta gcctcttttg tttctggtta cgcatctggc gcaggatttg gcttaatgga 360
 tgcaggtagt aaagcagttt aatggaatac tgcaactaca ccagtacaat taattaacgg 420

tgtatctaaa atcccattcg ttgcttatgt tcaagctgaa tcagctgacg ctaaagtaac 480
gccagtgaa ttccaagccg ttatcaactt c 511

<210> 734
<211> 726
<212> DNA
<213> *Proteus mirabilis*

<400> 734
tttctcacia gcagagcagg acgattctgt ggaatttaac attcatatgc tagacgcgga 60
agatcgcgat aatgtcgacc ttccacgttt ttctacctca aattatatca ttccgggtat 120
gtactattta gatattcgtc taaatggctg cgactttcct cgccaaaata ttaattatat 180
tgaagtagca gataatcatt ccgtggcttg tatcgacct actcttttaa aaaagttaac 240
aatcaacca gaaaaccaa aatatatcaa acaaatatca ccagattggt ttgatattag 300
ccaattacc ggtatctcga ttaaaaatga tgggtgtgta cttgatatca cgttaccgag 360
ctcattaatg aaatatgaag aatctgattg gacacctccg gagctttggg atagcgggg 420
ctctgggctt atttttgatt atacactaac aggaacgtca actcgcccta ataaaggcaa 480
taataacaat acgttaactg gttatggcca agcgggatta aacttgggtg aatggcggtt 540
acgagctgaa tatcaaggca attattcttc tgaatattca tctaacaatc gttttgattg 600
gaaccaaat tatgcctata agccattacc tgatctcgca gctaaattaa cggttgggga 660
aacttattta aactctcaa tttttgatag tttccgttt acaggagcca atttacaag 720
cgatga 726

<210> 735
<211> 568
<212> DNA
<213> *Proteus mirabilis*

<400> 735
atgccgtatt agatcacacc acctttccta ataacaagc gggagaatta gcaacagtaa 60
acttttcggt gcctgatcgc tatgatggca cggtatattg tcctaactca cgtatttatg 120
atcgtgcatt aacctatfff aaagcaacca ctgatttacc tcctgttggg aataactfff 180
atcaattaa tgagtatggt gatatcaaaa ttaattttga aatttggggg cctaactcct 240
taccacagt gcccttttct gacataccta ataatagaaa taaccaaca ggttgcagag 300
taccctcttc acctaaaccg catatttctc caggaagtag cggccaactc actttccggt 360

taagaaaacc cattattaat ggtgtcagtc ttaatgggca atctcttgca caaatgtatg 420
 ccatggtaag tcacagcggg gcgcaaaaaa cctatgggtc agagcccatt tctaaattag 480
 tgatcacctc ggggatcatt accactaaag ataatgtat ttttaataat ggttcaccaa 540
 ttacctttga ctttggaat gtgggaaa 568

<210> 736
 <211> 544
 <212> DNA
 <213> *Proteus mirabilis*

<400> 736
 aacaggcaca ttaacagagg gtaaacctca agtcactgat gtcatagcta atgtaggctt 60
 taatgagaaa gagctactga tgttggttc ttctgtagaa gttggctctc atcacctct 120
 tgcaaaagcc attattaata aagcacaaga gcaacaaatt gatgttgtgg aagccgataa 180
 tcgcaaggct ttagcgggta aaggtattga aggtattta aataatcagc atattctggt 240
 cagtgcocca acacaattat cagaaacat accattatct gcacaatggc aacaacaagt 300
 cgctcgtctt gaagatgaag gcaaaaccgt tgtggtgta ttaaagaag atcagttcat 360
 tgggtgatt gcgatgcaag atacattgag caacgatgct atcgaatcaa tgaagagaa 420
 gaaagtgttg aaatcgatga atatcaatgc cgtgatgta accggtgata acccaagagc 480
 agcggctgag attgcacaaa aactgggtat ggatttccgt gcaggattgc tcctgaaga 540
 taaa 544

<210> 737
 <211> 641
 <212> DNA
 <213> *Proteus mirabilis*

<400> 737
 gcacactgac ccaattaaag ccaatacat taactcgctt atatgctctg tttcttctgt 60
 ttatggccat atccctttt ctatatgctt atagctattt tgatacttg ctagaaagta 120
 aaaaaaatgc cattaacaac acgactaata agtttgcac tcaagttgaa gattaccgct 180
 atcacgctaa ccaactattc cagttatcaa acaaaattaa tgatccaacc ctctttctgc 240
 ctttaaaaat caatccggtc aaactacgct ctgatgttta ttggcttgaa ggacgcgatc 300
 agaccgttga tgctattggt tttggtaaat cgaatgaaca aacctttcag ttagccggtt 360
 atttgcaaa cgcgtagaa attatttggg gggtagctaa taactatagc tctctctatt 420

atcttaatgg taaaggcaat gatcttatcc ttattactac cactcaata ctaaaccag 480
aattgcgta taaagaaagc tatttaacac taacggctga aaacaaacgt tctgagctat 540
taatgcaatc aacggcatta gatgaaaaag agagccttcc tcccattagg aaaatgccga 600
cagaaaacat ttattactat acctatcgca ccatgtttaa t 641

<210> 738
<211> 699
<212> DNA
<213> *Proteus mirabilis*

<400> 738
tggcttggaa acacaatcat tcattcccgc atcaatacaa cgttgttttt cttcggcaat 60
cgcaattgct gtaacgcaa taataggaat agtgctactc aattcacgca ctgttgctgc 120
taattgatag ccattcatat ttggcatatt gacatcgggt aaaataatat cgacatgatt 180
ttcttgcata aaggctaaag catcacagcc atcttctgcc gttgcggtat taaaaccaat 240
ttttttcagt tgatcggta acaataaacg attgataggg tgatcatcaa caatgagcac 300
cgtcaataat tgtagatcgt gatctgtcat taacgcgta tttctgagt catcagactc 360
taattttggt tgtggttaatt gtaggataat ctaattaat tcatttaatt tatatgtact 420
gcataacca ttattttcag agattttctt tgctggctca aaatagtgtt cataaatagc 480
gataaattgg caagagttat ctaaaccatc atcatgatcg gtgataataa aatcattctc 540
agatacctga gtcacttccg tgaataattg acaatgtaag cccacataac ttagatatcg 600
ttcaacaaag ctttctagat agagattttt aactactgata aagcagcgaa tagtactctc 660
tttatagaga ttatatttgg tttgtccatc actcgaatt 699

<210> 739
<211> 341
<212> DNA
<213> *Proteus mirabilis*

<400> 739
cgagcatgac actaataatg gctttactgt cttggatgct gcacaagtta atgatcgtgg 60
tggtgatgat ttagtcgccc aaattaaaga gattgtgggt tcacttctctg tttatttgac 120
ttttgatatt gattgccttg atcccgcatt tgcaccgggt acaggaacac cggttgtggg 180
gggattaacc acggataagg cgctgaaaat gctgcgtgct ttacagccgt taaatattgt 240
aggcatggac ttagttgaag tatcggcagc gtatgatcaa tcagatatta ccgcccttgc 300

cggagcaacc attgcacttg atatgctata tctgcaagcg g 341

<210> 740
 <211> 323
 <212> DNA
 <213> Proteus mirabilis

<400> 740
 tacgtacatc gccaccagcg aaaactgcat attgccatta atacctttgc tcatcctgat 60
 ggatttgaac gctggcaaaa agccattgat atggcggctc atttaggtgc cgatgcatta 120
 attttgccg atattgctat gctagagtac gcagctgaac gctatccaca gatagagcgt 180
 catgtatcgg tacaggcgtc ggccactaat actcaggcaa tcgcatttta tcaacgcaat 240
 tttgatgttg cacgtattgt actaccacgc gttccttcta ttcacaaagt caaacaattg 300
 gctcaaagta gtcctgttcc ttt 323

<210> 741
 <211> 360
 <212> DNA
 <213> Proteus mirabilis

<400> 741
 gaaatacgca ttaggctctg tactttatta ttggcaaaaa gaaacacttg agacatttta 60
 tcggcaagca aaacagagcg atgctgatat tatctactta ggcgaaacag tctgtagtaa 120
 gcgcccgtgag actaaaccac aagattggat taatctggcc aaagaagtgg ctaaaagtgg 180
 taaacaagtg atcctttcta ccttagcaact actacaagcg ccttctgaac taaaagagat 240
 agcaaagctg gtggataacg gtgaattttt agttgaggct catgattttg gtgtgatcaa 300
 tatgctttat gagcgtcatt taccttttgt agtaggcat ggattaaact gctataacgc 360

<210> 742
 <211> 516
 <212> DNA
 <213> Proteus mirabilis

<400> 742
 caaggtttcg ctaactaaag agaaaccggc aattagctta actaaaaagg atgatttcgg 60
 caaaatccgc attaacctcg attggcatcg agaaagtaaa agcggtggtt ccgggttatt 120
 aggtggatta tttggtggtg acaaaggat tgatttagat attggcgctt ttgttgaact 180
 acaagatggt tataagtcag tgatccaagc cttaggaaat ggattcggtg attttaatcg 240
 catgccttat gttgagttac aaggatgatga tcgcaactggt gatgtagcgg gtggcgagtg 300

gatttttatac aatggacgtg aatggaaaaa tatcaagcaa gtgcttattt ttacttttat 360
 ttatgaaggg gttcctaact ggagtaaaac agatggtgtg gtcactattc atgttcccga 420
 gcaaccacct atcgaaacac gtttaacgga tggtaataat ggtcgagcta tgtgtgccat 480
 tgcacgactt attaatgaaa acggatcaat caaagt 516

<210> 743
 <211> 516
 <212> DNA
 <213> *Proteus mirabilis*

<400> 743
 ttctaaaggt ggtaatgttt ctttaagcaa agcagcccca acgatgaaaa acgtcctagt 60
 cggacttggt tgggatgccc gttctacaga tggtaagat tttgacttag atgcatctgc 120
 atttctgtta gccgctaata gaaaagtacg tagcgtatgcc gatttcattt tttataacaa 180
 cttaagatct tccgacggct ctggtgttca cactggtgat aaccgaacag gtgaaggtga 240
 tggatgatgat gaagcactaa aaatcaaac agataccatc cccagttatg tcgaaaaaat 300
 tatctttgta gtgactatcc atgaagcgca accgcgtcgt caaagctttg gtcaggtatc 360
 tggatgcttt attcgttttag ttaatgatga caaccaaatt gaagttgctc gttatgattt 420
 aacggaagat gcatcaacgg aaacggcgat gttatgttgg gagttatata gtcataacgg 480
 tgagtggaaa ttccgtgctg taggccaagg atatgc 516

<210> 744
 <211> 500
 <212> DNA
 <213> *Proteus mirabilis*

<400> 744
 gagccttggt tatccctctt tcattccctt tactcgcctt atcttgctac tggtgggcag 60
 gaaatggtct ggtggataga acatggacag cttcaggaat ggatagctat agttatcgcc 120
 aagcgttaag acagccaacg gttggctcac gttatactct ttttaaatatt acaccgata 180
 tgccaacgcc aggtggcacg agtcctgttg gtactaaagg aattcgctat attgcatga 240
 aatatggccc ttatggacaa cctgaacact ataaaacct ccaagtgatg ttctctcact 300
 attccaccac cactacacgt aaagttcgtt atttaggtga gttatatacc gttgtcggtg 360
 atatttattt aatcgatcct gctgctacca ccaatgaatg gcaacgcggg cgtagccaaa 420
 tagttgaaga gtattatgag attttagata cacatggaaa taggacaggg aaaggattgc 480

gttttaaccg ctgggataga 500

<210> 745
 <211> 550
 <212> DNA
 <213> *Proteus mirabilis*

<400> 745
 gctcatatca tcttccatcc ctgcctaac cgacttaccg taaactaaca caagatgatt 60
 atggggtaat tagtgactat ttgtcctatt ttggcacctc taagttttct gctgggtatt 120
 cgttacaaaa ctttcctgaa ataccacta aagggtgaagt cgttacgaca ctgctgtaata 180
 ttgttaatcg gtttgcgga tcatcagagg ggatcaatca ttggcgctat tacattgatg 240
 cggtagagat ccatattcct ccattactgg tgccttatct gcaacaagaa aatgtcctcg 300
 atgtcgtttg tactccttct atccccattg tcattgggtg gaatggccat tttcttaaag 360
 atgaaaaatc acatTTTTTCT gcgttaagtt taaaacaact ttctgaacct atactgtcaa 420
 atggcacttc cactatccag aaaaatgaag gtgatgcggc gcatttatta catattcgcc 480
 aagaaaccaa cgaagagtat cggttacacc attcttcagg tttttggaat ggttcgtaa 540
 ttgcttagg 550

<210> 746
 <211> 401
 <212> DNA
 <213> *Proteus mirabilis*

<400> 746
 aagataggta cgcttttaaat ttcttacagt ttactcacia tgagtttgat ctctttttcc 60
 tcctttgctc aagtaaatca cgatcccctg accaaatggt atgagttgct aacagatgca 120
 agccaaacaa ccattaaatc ttgtctatta gatgaactga gattatctga agagcagttg 180
 aatggtatct ataataaaag caaaggcgac cttgaagata gtgactctat cgcggctaaa 240
 agtgctattg atgcattagt cagttcacia gagcagttta ttcttttttag aagtagtgaa 300
 tgccaacgct aatctgcttt aatgatgggg ggcaatgggt ctgatgaagt actgctgget 360
 tgtgaaataa aattaaatca atggcgagct aaattattac t 401

<210> 747
 <211> 513
 <212> DNA
 <213> *Proteus mirabilis*

<400> 747
 tcacagtcac cactaatctc acgttgatta ttcctaaata tagtcaagtt tcttgtgatg 60
 tgacaaattht tttcccgacc aaaccgattg aattacatac cttagtactg tctgaaactg 120
 aattacaatc tgtgttctct ttactcaaac cattaataaa atcaggggag ccgattactc 180
 gtcacatctc agattatcat ctatcaacac ctgaggtggt taaaactaat tttacgttac 240
 ttcagcaatg tctaccgctt gaacatggca cccctctca agagaccctg tttatgcaac 300
 agagcctctt tttatthttg ctggcggttt atcacgaagg ggtcgatatt cttaatattht 360
 ttcgthttaa ttatgatgag ccaaaaaatc aggcgatcac tcatctaata acacaagatc 420
 cgcaacgtaa atggcattta gaggatgtag caaaaacgct ctatactaca ccatcaacat 480
 tacgtcgcca tthtaagtaa gagggcgtht cgt 513

<210> 748
 <211> 583
 <212> DNA
 <213> *Proteus mirabilis*

<400> 748
 acgtccctga aacactctca ttagccattg atagcttctt aagttatata gaagttgaac 60
 ggcgattaag tccgtaacg gtagaaaatt accagcgaca attaatgacc attgcacaaa 120
 tgatggttgc aataaaaaatc aaccaatggt cgthtactgga aagccaacat gtgcgcatgt 180
 tattggctaa aagccatcgc agtggattac aacctgcaag tttagcattg cgctthtcag 240
 cattgcgtag cthccttgat tggcaagtht ctcaaggaat gttagcagta aaccccgcca 300
 aaggggttcg aacacccaaa tcaggtcgtc acttgccctaa aaatatggat gttgatgaag 360
 tcagccagtt gatgaatata gacttaaaaag atcccctctc tgtaagggat agaacgatgc 420
 tggaagtgat gtatggcgct ggattacgtht tatctgaact gactaactta aatatcaatg 480
 atattgatct ccaagaaggc gaagtcagag tattaggtaa aggcagtaaa gagcgtaaag 540
 thccttggg aagaaaagct gtagagtggc tacagcattg gth 583

<210> 749
 <211> 193
 <212> DNA
 <213> *Proteus mirabilis*

<400> 749
 caggaacggg thtcttatca tcaataagat gtctaattgc taaatagga tgataaatta 60

gcattcgagg cccagcccaa cgcattgactt gtttcattgc tgctcttttt actggctgat 120
 agcagtgaaat tgggcattgt ttgcaggcgg gtttttcctc accatagcga catttatcta 180
 gtctttttata agc 193

<210> 750
 <211> 520
 <212> DNA
 <213> Proteus mirabilis

<400> 750
 atcacttcta tccaaaacga agtgaagaac gtttttagacg aatcaaacg tatttctgaa 60
 caaactcagt ttaacggcgt taaagtactg agcggtgaga aatcagaaat ggttatccaa 120
 gttggtacta acgataatga aactatcaaa ttttaacttag ataaagttga taacgatata 180
 ttaggtggtg cttagcgataa actgtttgat accaaaacag agaaaaaagg tgttacagca 240
 gcaggtgagg gtgttactga tgctaaaaaa atcaatgcag ctgacgacct ggatatgatg 300
 gtatcactgg taaaagaatt taatcttgat ggtaaaccag taactgataa atttattggt 360
 actaaagggt gtaaagacta tgtagcaact aaaagtgatt ttgaattaga tgctacaggt 420
 actaaacttg gattaaaagc atctgccact acagaattta aagttgatgc aggtaaagac 480
 gttaaaactt taaacgttaa agatgacgct ttagcaactt 520

<210> 751
 <211> 515
 <212> DNA
 <213> Proteus mirabilis

<400> 751
 caacagtgat ttccatttga gaatctgtac cttcttttacg agaagtcaga actaaatggt 60
 taacgccatc ttgggctttt acaatagtgg cagaaacggt gccttctttt ttattgatag 120
 catcacgtaa ttcaataata gaagtttggc tgtctgttaa ctctattttt aaaggctctt 180
 tttcaccttt ttgggtgatc actaaagtcc gtgttttgcc ttcacctaata gtttcaccaa 240
 taggatcttt gatatacactg acggctttttg atttcagtggt ttgagcatgg gcaagctctg 300
 ttacagagac cgtataatta ccaatgcttg ctttaccatc agtggttact ttaaaggcat 360
 caaactcatc atcaactttg gtggcgacga ttttatcgaa tttttttaat tcttcagatg 420
 cttctgtaa tttatctaata tggctacgaa tttttccata tgcagtaatt tgtgcatcgt 480
 agcttttcat ctgtttgtct aaaggttcaa ggcgt 515

<210> 752
 <211> 274
 <212> DNA
 <213> *Proteus mirabilis*

 <400> 752
 acacaatcca ttcacagtt agagcaggat ctaggacgac caccatcaga acaggaagtt 60
 gctgatcatt tgcagattga gttagcagaa taccggcaga tcctattgga taciaataac 120
 agccagttgt tctcttatga cgaatggcat gaaatctacg gtgaaagctg tgaaccgtct 180
 caagacgaag atcacgatga caatccttta caaatgttat tggaaagtga tatacgccaa 240
 agagtcatag acgcgataga attgcttccc gaaa 274

<210> 753
 <211> 657
 <212> DNA
 <213> *Proteus mirabilis*

 <400> 753
 gacttaattg ctctcgtat tgatagtaga gggaaaatca ctgctgctga aatttcagcc 60
 tttactggac aaaacacctt ctcaacaat tttgatattc tctcttcaca aaaaccggt 120
 tcagcattag atagctatct ctttggtagt atgcaatcgg gtcgtatccg cattattaat 180
 acggctgaag gtagtggagt taaattagca ggtaaattta ccgagataa cgacctaagt 240
 gttaaagccg ataatttca aacagatagt caagtccggt atgacagtta cgataaagat 300
 ggcagtgaaa attaccaaaa ctatcgtggc gggatcacgg ttaataatag tggctctagt 360
 caaacactca ctaaaaccga attaaaaggt aaaaacatca cattagtagc gagtagccat 420
 aatcaaatca aagcctctga ttaaatgggg gatgacatca cgttacaagg tgctgattta 480
 actatcgatg gtaaacagct acagcaaaaa gagaccgata ttgataatcg ctggttctac 540
 tcgtggaaat acgatgtgac taaagagaaa gaacaaatac agcaaattgg tagccaatt 600
 gatgctaaaa ataatgagac attaacgca actaaaggag atgttacctt agacgag 657

<210> 754
 <211> 622
 <212> DNA
 <213> *Proteus mirabilis*

 <400> 754
 attaagcga aatgaaacag gaaatttagg ctcaatcagt gaatcaaggc gtgcattgca 60
 agatagccaa cgtgaaatta atcaattaat agaacaaaat cgctatcagc aactgcaaga 120

aaaagcggta aatatttcac ctacccaac ttttaattact gagtcagaac actgtttgcc 180
 tataaaaggc gtttatattc aaggtattac ttacttact gagaaggatc tcaattcatt 240
 atctccgta cctgatcaat gtattaagag tgctgatatt aatcgctcg taaaagaact 300
 cacacagcgt tatettcaac atggttata taccgcacgt atccaat ttcacgtcctaa 360
 ccaacatggc gaattaggtc tgtatgctat tgaagggtt gttgaacgta ttgaagggg 420
 tgatcgaggt gttaacacca cactactatt tcctcgaatc aaagggcaac cattaact 480
 cgctacactc gatcaaggct tagatcaagc taaccgttg caatcaaata aagtcacagt 540
 ggatattctt cccggtaccg aattgggggg ctctgtcatt aagttgtcta atcaacgaaa 600
 atcaccttg catctcaata tc 622

<210> 755
 <211> 450
 <212> DNA
 <213> *Proteus mirabilis*

<400> 755
 aaaaatgtag tgtttcagat tttagcatta ttaagagata gtattttagt taaaagtgat 60
 cgctgttcaa tgcttaattc cattgaagcc agagctcaa ttctggatta taggataatt 120
 gaatttgcatt ttaatgaggt tcctgataat tttaaaatta gaaatggaat gaaaaaattc 180
 ctattgaaag atatatcaaa aaaaatatta cctaatgagt ttgatattca gaggaatta 240
 ggatttaatc taccactagg tatgatgatc agagagggaa aatggaagga attttctcgt 300
 gatataatca attcaaaatc tgatataatt aattattatt ttataactaa aatgtttgat 360
 gagcatttaa gtggtaaaga gcgtgcagat cgtctatttg gcgtagtttt atttetaatc 420
 tgggcaaac ataataaagt atcgctatga 450

<210> 756
 <211> 400
 <212> DNA
 <213> *Proteus mirabilis*

<400> 756
 taaattagct ttagttcttg gtttaggtt atctgttggt gcgggttctg ctttagctgc 60
 agatcaaggc catggtactg ttaaatttgt tggttcaatc attgatgctc ctgctcaat 120
 tactctgat actgaaatc aaacagttcc actaggtcaa atttctactg ctgcattaaa 180
 agatgggtggc cgtagtaatt ctctgactt taaaatctct ttagaaaatt gtactacaga 240

gacttacaaa actgttcaaa caactttcac tggctctgaa gcaactgaag ttttagaagg 300
 ttcttttaggc attgaaggta tcgctaaaaa tgcagctggt gttatcaccg atgcgggtgg 360
 taaacaaatc aaattaggca cccaagtgc tgctcaaac 400

<210> 757
 <211> 500
 <212> DNA
 <213> *Proteus mirabilis*

<400> 757
 tggcaccact attgctatgc cttggtgcca gtttagtgac tgcgccaacg atagccagtg 60
 atgtaaaaca agataaaaac atgcatcagc gatttgggtg gctcaatcta caaggaacca 120
 tattagagcc gtcatgtgca atatcagcgg gaagtagtga tcaagtgatc ccgctaacga 180
 cggtatctat cccaacgta gtcaactgaag gtcaaggacc gattgaatat ttttctatca 240
 gattaacgga ctgtacgcta attagccaga aagggcaaga agcggataat ccacgtttta 300
 tcgcaacggt cgatggtcct tctaattgaa atggcaactt tgagttatcc ggtgaggcca 360
 aagtgcttc attagcgata gcggatcgtt atggtcgaca agctattcca ggacaacccc 420
 taccgcccgt tggcattgat tcgcagtcaa tggcattgct gtaccaagct cgaatagtca 480
 aaaataacga tacgcaaaa 500

<210> 758
 <211> 546
 <212> DNA
 <213> *Proteus mirabilis*

<400> 758
 gatggtaatg ctgataataa caaagaactt tataccatta tgtttagtaa gcaatttctt 60
 gactggggat tgagtactta cttaaactat agtcaccaa catattggaa taagccaact 120
 aatgataatt acaacttata gttagcgaaa agcgcggata ttggtcgttt taaaaatata 180
 aattttagtc tctccgcttt ccgtaataaa tttaatggca ccaatgataa tggcgtttat 240
 atgaatgtca gtatgccttg gggatgatcgt gcgaccatca gttacaacac tgtcattaat 300
 aagagcggta actctcataa tgtcagctat tacgatcgaa ttgatgacaa tagcagttat 360
 cgtgttggcg ctggggtaag tagcaatggt aaaccttcag ccgatgctta ttttatgcat 420
 tatgctgatg cggccttagt caccgccagt gcaagtcata tcaatggtga atatacctct 480
 gccactttat cgctacaagg tggtgccaca cttacgcoga aaggtggagc attacaccgc 540

gttagt 546

<210> 759
 <211> 320
 <212> DNA
 <213> *Proteus mirabilis*

<400> 759
 caatctatgc ctgcaaacg gatttaacca atccttgga agagcagatc actttaacta 60
 aaaaagggtga tcgcttcgaa gtgaataatc caacgcctta ctatgtgaca ttagtcgatg 120
 gattaaccag tttgaaagga aaaagcttgg atggctttga accattaatg atcgcaccta 180
 aaagtagcgg cacgataaat ctgagtgtt ccatgtttgg tgcttcaccg gtattgagct 240
 acatcaatga ttatggcggc cgccctcaga tgaattcac ctgtagtggc aatcaatgca 300
 aagtaacaga aacggcagct 320

<210> 760
 <211> 507
 <212> DNA
 <213> *Proteus mirabilis*

<400> 760
 aacagtgggt tagcccaagc aaggcagtgt tggtttttat tctggcaaca tttactggag 60
 gcctgagttc tactgctggt gctaacttac ctgcaggagc agtaataaga gcgacccccg 120
 ggattgttta tatcaatatt actggaaacg tcatcgctcc acctccttgc ttaatcaatg 180
 acggcaagat gatcgaggtg aatthttggc aagtaatgag tacgcgtatt aatgatagca 240
 attataagca acctatcgaa tataaccgga cttgccaaaa aagaccgact aacgccatga 300
 aagtctatat aacaggtaat gcaacagggt tcgatagtaa tgcctacaa actaatatta 360
 cgggattagg ggtacgcatt ctttatcaag gtaaattatt aggattaggc tcagcgggta 420
 aatttaccta tccaatttg ctaaactag aagcgatccc tgtgcgtgat aatagagaaa 480
 cactagttgg tggagattht gttgcca 507

<210> 761
 <211> 451
 <212> DNA
 <213> *Proteus mirabilis*

<400> 761
 ttactaaatt ctacagcagt aatggcggcc gactcgccta atttaaaatt attcggaaaca 60

ttattagtgc cacctccttg tgttatcagc aatgacgaac gaattgaggt tttttttggt 120
 aagaacgtcg gtattaataa agttgatggt attaactata ccgaatcggg gaattatacc 180
 ttggtatgcg acgctaattt aaaaggttgg gatttgggat tatcaattat cggacctaaa 240
 acccagtttg atgaggcggc attgcaaacc aatattccag atttaggtat tcatttaact 300
 caagatggta agccttttaa gctaaatgag cgtattggga tttcaccaga ttcgcctccg 360
 gttattcaag ctgttccagt aaaaagaccg ggaagtacat tgcctgaagg ggcatttgaa 420
 gtctcagcca cttatttagc agaataccaa t 451

<210> 762
 <211> 526
 <212> DNA
 <213> *Proteus mirabilis*

<400> 762
 ccggttcata ttgggtctat ctgtatccat agggttaact tcagcggctt ttgcaatacc 60
 ggacaacctc tattttcagc gcatattagt tgatgagcct tgtaccataa aaccgggtga 120
 tgaaaccgtg gtactcgatt ttggcaatat tcttgataaa aacctttatg cctataaaaag 180
 aacgccaagc aagttatttc aattacgtct gtcagaatgc gatctctcaa tcggtaaaag 240
 cgtcaaaata acctttaaag gagaggaaaa ccaagcaatg gcaggagaag gatttttggc 300
 aataagtccg ggcagccaag cttctgggat tgcggtggga ttagagtctg aaaatggtaa 360
 tgctctacct ataaataaag aaacagacaa gatgtcatta actgcgggtg aactatttt 420
 gaatttttat gcctttatc aaggtgagcc ggatgcgatt gcgaataagt cgattaaacg 480
 tggtcctttt agtgcaatag ccaccttcta tttgaattat gactga 526

<210> 763
 <211> 505
 <212> DNA
 <213> *Proteus mirabilis*

<400> 763
 ccttctaacg ccacttacac ttatgttatt gagcgttggg atccagaaac ctcaggaata 60
 ttaaactcctt gttatggttg gcctgtgtgt tatgtcacag tgaaccataa acatacagta 120
 aatggtactg ggggaaatcc tgcatttcag attgctcgaa ttgaaaaact acgtacttta 180
 gctgaagtcc gtgatgtagt acttaaaaat agatcattcc ctattgaagg gcaaaccacc 240
 cacagagggc cttcattaaa ctctaataca gagtgtgtgg gattatttta tcaaccgaat 300

tcaagtggta tatcacctcg aggaaaactc ttaccaggtt cactatgcgg tatcgacca 360
ccaccagtgg gtgcttgtaa aatatctgaa ggtgcggtga accttaacta tggatgatt 420
gatgaagcta gtttaagtgg tgctaagcgc tctgaaacaa tcaatgtaac ctgtaattta 480
gcaatgaaag tgttggttat cgcac 505

<210> 764
<211> 408
<212> DNA
<213> *Proteus mirabilis*

<400> 764
aacatatgag ggtgtggact aatagaaaca ttggcttttt tacctaaacg gcgtaataac 60
ccataaactt gttgacggga aattggtccc gttttttgtg ataaaaatac ccattcagaa 120
tctgattctc tccagttttc tctacttttc aaccagttgc ataaggcttc atattcctca 180
tcaataatag gttgtgttgt tgaaagccca ctttttaaac gcctgacata gagtattcta 240
ctttctagat caatatcgct taatgttaaa ttacatagtt cgctaacacg aaaaccatgt 300
aaaaaacaca ttaaaaacat acagtaatct ctttcgggat acctaccttc cttagcttgc 360
tttaaaatag cattcacttc aaaacgtgta agaaatttac gttgcttc 408

<210> 765
<211> 310
<212> DNA
<213> *Proteus mirabilis*

<400> 765
ttgattttgc gaatatagat gtaaagtctt ctgtaggtaa aaagatccaa aaaaaacgta 60
aagagctggg ttataccggt atgcagctgg ctaaaaaaat tgggtgcagc cagcaacagt 120
tttctcgcta tgaacgaggt atgaacaaaa tagatctcag acatttagtg ttgttagctc 180
tctattttaa tacaccatt tattggtttt ttgaggattg ctacgtaaaa aagccttcat 240
taaataataa aggaatagat aagcgaatt atgttattgc tcaagcaaca cctgatgctt 300
ttcattattg 310

<210> 766
<211> 510
<212> DNA
<213> *Proteus mirabilis*

<400> 766
tggagtatca gagctatttt gtttaagcct ttttttggaa atattggact ttattcctat 60

cttgaaaaac ctatattctt attgggtatc aaaaaagtat ttttaggacg tagagttaga 120
 attttccctc actctagaat tgaagtgcac ggaaataaat tgtatgagga taatatctct 180
 ataggacagt catttcatat aatatgttca agtaataatta ttatatctga aggtacatta 240
 atctctgcta atgtatztat tactgatact gatcatacat ataaaaatat ttctctaccc 300
 attcatgttc aaaaaactaa tatttctacc acttatattg gtaaaaattg ttttatagga 360
 tatggcgttg ttattcaagc tggaacaaaa ttaggaataa attgtatcgt tggtgcaaac 420
 tcaacaataa aaggctcttt tttcgataat tcaataattg taggttcacc tggacggatt 480
 attaaaaaac tagataaatt atggctgact 510

<210> 767
 <211> 934
 <212> DNA
 <213> *Proteus mirabilis*

<400> 767
 ctatcagcca cctcttcttg aatacagaga atacgcaaag cagaacaacg ttgacccgca 60
 ctatcataag cagaggccat aacgtcagtg accacttggt ccgtaaggc agaagagtcg 120
 acaatcatgg cgtttaagcc acctgttca gcaattaaag gaacagggcg accttcgcta 180
 tcgagtctac ccgctaaggt tttttgcaaa atgtgggcaa cttcggtaga gcctgtaaac 240
 atcacaccac gcacgcgttc atctgccact aattgtgcac caatggcttc ccctgaccc 300
 ggtaagagtt gtaatgcact gcgaggtact cctgcttgat aaaatagttc tacggcttta 360
 aaagcaatca gaggggtttg ctccgcaggt ttggccagta cggattacc tgccgctaac 420
 gccgctgcaa tttgtccact aaagatggct aatgggaagt tccaaggact aatacagaca 480
 acagggccta aaggacgatg ggtattatta tcaaaatcat ttgccacttg tgctgagtaa 540
 taataaagaa aatcaattgc ctcacgcact tctgcaatag cattactata ggttttgccc 600
 gcttctctta ctaagacccc cattaatggg cccatttgct gttccatcag ctacgccgtg 660
 cggactaaaa atgccgctct ttccgcaggt ggggttgcaa accaaatttc accattttct 720
 tgggcaatat ctaaagcaaa attagcttcg gcgcccgtcg tttcacgtac tgtaccgacg 780
 acatcgggtg gatttgccgg attgagtata gattgtggtg caatcacttc ttctgacta 840
 ttacactcac caccaatgag cggatggctg tgaatttttt ccatcgcaga ggtcagtaat 900
 gcactggata atgaggctaa acgatgctca tttag 934

<210> 768
<211> 501
<212> DNA
<213> *Proteus mirabilis*

<400> 768
gcactagcta ctattctttc tgctgcattt gctggctcat ctatggcgta tgacggaaca 60
attacattta caggtaaagt tgttgcgcaa acctgctctg tcaatacaaa tgataagaat 120
ttagcggtaa cattacctac agtatccacc actacattaa atgaaaatgc ggctactgca 180
ggctcttactc catttactat tcatttaact ggttgcgctg ttggtatgga tggcgcacaa 240
agtgtcaaaa catatthtga accttcaagt gacattgatg taaccacaca caacttaaaa 300
aatactgcac aaactaaagc tgataatggt caagttcaat tacttaactc agatgcagca 360
acaacaatcc agttaggtac tgattctgca acacaagatg tccatccagt acaaatcgac 420
aatgctaatag taaacctccc atatthtctg caatattatg caaccggaca atctaccgct 480
ggggatgtaa aagcaaccgt t 501

<210> 769
<211> 383
<212> DNA
<213> *Proteus mirabilis*

<400> 769
gaggtaactgc atcgcaaagc cagacattga cggttgcaca agagggttt ttagagtgg 60
taccccaaga gaatatcttt tttctgatg ctcaagtgtg ttttaaccaca catattcatt 120
tagcctcatc agcgaaatth atcggctggg aatgcagtg ttttgagcgc ccagthttaa 180
atgagtggth tgaaactggc aaggtaaaag ggcgcttaaa tthttatgth gatgagagat 240
taatthtaac agagtcaatg cgggttgaag gcttacaaaa acaagctgcc gcaatgcgtg 300
aatttctat gthttgctcg cthttattht atcctgcaac cgatgcatta aaagagatta 360
ttcaacacca thtagagaag gta 383

<210> 770
<211> 414
<212> DNA
<213> *Proteus mirabilis*

<400> 770
gcgcttgaac taacctctac agaaaagcca aagthtaacc thtgccttac catggatgag 60
cgcacaaaa gtcgcttaaa agtggcttht agtgacgggc aagaagccgg gctatthttg 120

cctcgaggca ccgtacttaa agagggggat attctgctgt cagaagaggg cgatgttgtc 180
 accattgaag cggctaaaga gcaagtatca acggtttata gtgacgatcc attattgctt 240
 gctcgtgttt gttatcactt aggtaaccga catgtaccat tgcaaataga agcggggttg 300
 tgtcgttatt ttcacgatca tgtattagat gatatggctc gcggcttagg ggctacggtg 360
 gtggttggtc tagaaaaata ccaacctgag ccgggggctt atggtgggtc atcc 414

<210> 771
 <211> 500
 <212> DNA
 <213> *Proteus mirabilis*

<400> 771
 gtcagcaga aaccttgta gattggttaa gcgcacaaat gaccggaaca ttagccacac 60
 tcgagcttcc tatattgctg caattacaaa cgagtttggc aaaggggtgat agcgatacag 120
 tgaaatattg gtgtgacttt atggctgcaa gtcgcgaaac caaagagtta aggcaggaag 180
 agcgtcaacc ggggatcgtt tttccccggt tacttcctca attaggcatt gaattagacg 240
 atacgttaca acagcgggtt aaacagacgc aattaatggc gtttgctgta gctgccgtgc 300
 attggcatat cgatagtga aagctctggt gtgcctatgt ttggggctgg ttagaaaata 360
 cggatgatgc tggggtaaaa ctgggtccat tagggcaaaag cgcagggcaa aaaatggtgt 420
 ttgctctagc tgagcagatc cccgctattg ttgagttatc ggcacattgg ccacaagagg 480
 atattggcag tttacgccag 500

<210> 772
 <211> 560
 <212> DNA
 <213> *Proteus mirabilis*

<400> 772
 gggatcttct ataactattc aaccaaagta ttaccttctt ttgattatga taccgcagga 60
 aaacatatag cccgtgaaga ttccacttgg aatggcaaat atgttattgg gcaaccgct 120
 gaggtgactt attcattccc aaaatgggaa ggcaaattta atcaatttgg taataagaat 180
 ccttatgaat ttaatgaatt acaaaaagag catgcaagaa aatctttaga tgcatggtct 240
 gatattgcaa atattaaatt tactgaagtt gctgttggga atgttgatgg aatgaaggct 300
 tctgacgtaa aaacagatat tacttttggg aatatctatg atcccaatgg cacatttcag 360
 gcttatgcaa cattgcoctaa tacctatgct tatggaaaag atctttctgg ccaagcatgg 420

tttagtgatt atcattatgc aggtaatact acaccagaat tgggtaatta tggtcgttta 480
 actattatcc atgaaattgg tcatacactg ggtccttatgc atcctgggtga ttataacgca 540
 ggtcagaatg ttccaggta 560

<210> 773
 <211> 509
 <212> DNA
 <213> Proteus mirabilis

<400> 773
 tttccttgat ctaccttggg tccctattta ccttttagtt attactttat ttaatccttg 60
 gttaggatta tttgcacttt gtgggtgcct tatcctatct gctttggcta tccttaatga 120
 atatctatct aaaaatcatt taaaaaaagc gaatagtttt gccaatcaag cacaattaat 180
 acaaagtcatt catttagaac atccacagac tatcgaagcg atgggaatgc ttagtcaatt 240
 acgtaaacia tggcaaacct ctcatctcaa atacttacia gcacaaacac aagccagtga 300
 taatgcagcc ggtatcaacg ctatcacaaa agtaaacagt atggcattac aatctttaat 360
 gctaggttta gggggatggc ttgctattga taatactatt agtcctggaa tgatgattgc 420
 aggttcaata cttttaggtc gagcattagc ccctattgag caagtgatca atgtatggaa 480
 aagttgggat agtagtaaag cagcctaca 509

<210> 774
 <211> 576
 <212> DNA
 <213> Proteus mirabilis

<400> 774
 aagaacaagt agcaggtaaa gagtatgaaa atatcggggt atcacaattg ctaccaata 60
 tttctgtcaa ttacaaaaat aatcctcgca actggcaacg taaggcttat ccaataaata 120
 tatttcagga taaaataaca acagttgagt atcaaaacta tcaaagctat tctgtcaacg 180
 cgattattag tcaaccacta tttgactaca ccgcatttag tgaatacaaa gcttctatca 240
 ttaaaacatt attagcagac agtcattatc aaaataaatt ttcagaatta attattcgac 300
 ttatcgataa ttatattcaa gttgcttata cacaagataa attattacta aatcaagcac 360
 agcaagaaat ctatcaaaaa caactagctt caagtcaacg cctatttgag ttaggagaag 420
 gaaccaaac agatattgct gaaatagaga ctcgtttata ttaaccag tcacaatata 480
 ccgatcttca attagaaatt gaaaaggcta aaaacaaact cagtgtatg atcggttac 540

aattgcctac tcatgagcac atcgcaaagc taactg 576

<210> 775
 <211> 626
 <212> DNA
 <213> *Proteus mirabilis*

<400> 775
 ccaacttact tctatctacc tgatggtaaa attgttataa attatatgta tggttggcct 60
 aaacaaccac atagtaatat caccaaaaata aattatataat tcctgatta tgataaaaaa 120
 agaaattact caaataaaaa atattcagta acagaaaaag atagaataga atcaataaaaa 180
 cataccgcta aagtatatga attgacctat cttaaggaaa aaaaagaaaa agaaatcgct 240
 tcattaaaat attatagaaa taaatattca ataagtagaa tagctgaatt agaaaaagat 300
 atagaggata tagaaaatag tattatTTTT cacaagaata gtatacatcc gtatTTTTac 360
 aatacacaaa caaccatata tcctcatcaa caagaagtta tttccgatat tcttagtgaa 420
 attgccata taacacaagc aaagtTtggt gcatctaadc cagaattcga tgccgatata 480
 aaattTtggt tttacgatga ttttcatatt agtcatggtt caatagaatt ttcataatcc 540
 accagaggtt ttgcaacctc ccctagcaga tattcaacct ctataaaaaa gataaatatt 600
 gatgaacaat accaatactc tggaac 626

<210> 776
 <211> 583
 <212> DNA
 <213> *Proteus vulgaris*

<400> 776
 catcttattg tgggtccaag cctacagcaa tttataaaag tattagctta tgagatacga 60
 actttcatcc cggaggagct cattttagtt gatggcactc cgcttaaaat ttcccagct 120
 ctgcgtaata aaatctacaa tgaattaggt atttcctttt ttgataaaaa aacagcatta 180
 aaagaagggc ttcatTgggc gaaagaagat gatgagctta gccaacagat gtctgaatac 240
 cttaatggTg aaaccgtaat ttggattgag agcacactgg aatatcctgt tttatggatt 300
 aacacctata tttcaccttc tttatggatc cgggttccac tcaactgaatt aggcgaaaat 360
 ttcttactgc cagtttatcg ccaagcaatt atttttatta ttattgttat tgcctttttc 420
 tggttatata accgttttca aaatcgccca ttaaacgaag tggaatatgc agctcgtcgt 480
 attggtaaag gcgttatTcc tcccctatc ccagaatcag gttcatcaga gatgcgttcg 540

atcattcgcg cattaatca aatgtcatca ggtattcgcct ctt 583

<210> 777
 <211> 383
 <212> DNA
 <213> *Proteus vulgaris*

<400> 777
 cgtaagcctt atgttcgtgg tatgcagcca aactggtgga cgaaactcgg tttctatcgt 60
 ttctacatca cccgtgaagg aacttgtcta ccacaacttt ggttcagtct ggttgactcg 120
 ttcggtgat ttgcactgaa aaatggacca gaaagtggg cgggattcgt tggattccta 180
 agtaacccaa tactgatgct gattaatatt gtgaccctta tcgcaacggt attccatacg 240
 gccacttggg ttaagcttgc accgaaagcc gttaatatcg tcgttaaaga tgaaaaatta 300
 ccacaagagc ctatcgttcg tggtttatgg ggtctaacca tcgtcgtgac tgtcgttatt 360
 ctggcagtgg cgctaattgt tta 383

<210> 778
 <211> 345
 <212> DNA
 <213> *Proteus vulgaris*

<400> 778
 aatcagaatc aacttcctaa gcgctctgat gaacctatct tctggggatt atttggtgca 60
 ggtggtatgt ggagtgcgat tgtctctcca gcaattatta tctgctcgg tattetaatc 120
 ccgatgggta ttgcgccaga agcatttact tacgatcgta tcatggcatt tagccaaggt 180
 tttattggtc gtatcttctt actgctaatag attattctgc cagtttggtg tgcattacac 240
 cgtattcacc atacgttgca ccattttaa gtgcatgtac ctgctagtaa ttgggtatct 300
 tatggtgctg cagcaattat tagcgttatc gcaattattg gtgtt 345

<210> 779
 <211> 534
 <212> DNA
 <213> *Proteus vulgaris*

<400> 779
 gcgaagtaga agagaaagca cagcgcgaag cacaagaaaa agcacagcgc gcagctgaag 60
 aaaaagcaaa acgtgaagca caagaggcca agaaacaggc cgaagaaaaa gcgaaacgtg 120
 aagctgaaga agcaaaacgt gaagcagcgg aattagctaa gcgcgaagca gcgaaaaaaa 180

ataaagtgaa acaaaacgat aaacccaaaag ctgatgtagc agatcaggat aaagcacgtc 240
 gcaatgctga actggctgaa ctgaaacgta aaacagaaga agcacagcgc cttaaagttg 300
 aagaagagac gcgcgctgca gcagaaaaag cacgccgctt agctgaagaa aacgctgaaa 360
 aatggactgc tgaacctaaag gctcctgaaa cagaaaagcgc ggactatcat gtaactacat 420
 ctcgttatgc tcgtgatgca gaagatgaaa gcgatgcaga agtagaaggt gatcgccgcc 480
 gcggtcgtac tgctaaagca cctcgtgcta agaaaaataa ccgccactct gaaa 534

<210> 780
 <211> 582
 <212> DNA
 <213> *Proteus vulgaris*

<400> 780
 agctgatggt gttgttggtg gtgctggtat ccttggattt atgacagcaa ttaaccttgt 60
 agaacgtggt ttatctggtg taattgttga gaaaggtaat atcgcgggtg agcaatcttc 120
 gagattctat ggtcaggcaa ttagctataa aatgccagat gaaacgttct tattacacca 180
 tttgggcaaa catcgctggc gtgaaatgaa tgcgaaagta ggtattgata ctacttatcg 240
 tacacaaggc cgcgttgaag ttctcttga tgaagaagat ttagttaacg taagaaaatg 300
 gattgatgaa agaagtaaaa atgttggtc agatattcca tttaaacca gaattattga 360
 aggtgctgaa ttaaatcaac gtcttcgtgg cgcgacaaca gattggaaaa ttgctggctt 420
 tgaagaagat tctggtagct tcgatccaga agttgcaacc ttcgttatgg ctgaatacgc 480
 taaaaaaatg ggtgttagaa tttactca atgcgcggtc cgtggcttag aacacaagc 540
 tgggtgaatt tctgacgttg taacagagaa aggtgcaatc aa 582

<210> 781
 <211> 553
 <212> DNA
 <213> *Proteus vulgaris*

<400> 781
 ctaaatatgg cgcaggaaca aattactttg atatatccaa agagttatta ccgaagtggg 60
 cttgttatat tgccaatgct tcattgatct ttgtattata tatattgatc tatgcttata 120
 tctctgcggc gggttctatt atctatgaag catcactggt atatggtatt aattttaatc 180
 tgagagctat attttttatt tttacgatag cccttgggtc tacaatatgg tggggtggcg 240
 cttgtgctag ccgtttaacc tcaattttct tattcattaa gatagtatta tttatattag 300

cgttttcggg tttgtttttt aaagcaaaag gtgatttatt atttagtgca acttttgca 360
 gaaaaagcca attatatcctt taccctttta tttttattat cattccttat gccattacct 420
 catttgata tcatggtaat gttttagtc tttataagct ttataatcaa aacgaaagaa 480
 aagtagttaa gagttgtatc attggttgct tgttagcatt agtcatctat ttactttgga 540
 tgattggcac tat 553

<210> 782
 <211> 260
 <212> DNA
 <213> *Proteus vulgaris*

<400> 782
 gttcataggc ttcacgtagt tcagcacagt ttttaacaga gtttaaagg ctaacaggg 60
 accaaacacg agaaagctta tcgctgctt ctgctaagg ttggcaaagg ttatcctgag 120
 taaattgagt attatcagcc agtaattttt caactgtttc acgatatgtg gttaaaactt 180
 cgtttagtgc aggaacgaca tgttctggtt tgataagga aatgcaggt aatcccgttg 240
 tgctaagtaa tggatttgac 260

<210> 783
 <211> 199
 <212> DNA
 <213> *Proteus vulgaris*

<400> 783
 tggctgaaaa tgctgtaat gatattctaa aatggttaga aaccagtta caacgtaacg 60
 aaggtataaa aatcgatact attgcgaaca aaagtggta ttcaaatgg cacttacaac 120
 gcatatttaa agattttaaa ggctgcacat taggcgaata tgtccgcaa cgctgcttat 180
 tagaagcggc taaatcatt 199

<210> 784
 <211> 220
 <212> DNA
 <213> *Proteus vulgaris*

<400> 784
 gaaaggactt aaacttaact atccagagtc tgctgcatta attagttgag cgattatgga 60
 aggtgcaaga gaaggtaaaa cagtggctca attaatgagt gaagggcgtg ctgtattaac 120
 agcagaacaa gttatggaag gcattcctga gatgatcaaa gacattcagg tggaatgcac 180
 attccctgat ggtacaaaac ttgtttctat tcacgacct 220

<210> 785
 <211> 503
 <212> DNA
 <213> *Pseudomonas aeruginosa*

<400> 785
 actgacgctt atttgattga cactccattt acagctaaag atactgaaa gttagttact 60
 tggttttag agcgcggcta taaaataaaa ggcagtatct cctctcattt tcatagcgac 120
 agcacggcg gaatagagtg gcttaattct caatctattc caacatatgc atctgaatta 180
 acaaatgaac ttcttaaaaa agacggtaag gtacaagcta aaaattcatt tagcggagcc 240
 agctattggt tagttaagaa aaagattgaa attttttattc ctggcccagg gcacactcca 300
 gataacgtag tggtttgct acctgaacat agagttttgt ttggtggtg ttttgtaaa 360
 ccgtatggtc taggtaattt gggtgacga aatttagaag cttggccaaa gtctgccaaa 420
 ttattagtgt ccaaatatgg taaggcaaaa ctggttgttc caagtcacag tgaagttgga 480
 gatgcatcac tcttgaaacg tac 503

<210> 786
 <211> 348
 <212> DNA
 <213> *Staphylococcus epidermidis*

<400> 786
 atggataata aaacgtatga aatatcatct gcagaatggg aagttatgaa tatcatttgg 60
 atgaaaaaat atgcaagtgc gaataatata atagaagaaa tacaatgca aaaggactgg 120
 agtccaaaaa ccattcgtac acttataacg agattgtata aaaaggatt tatagatcgt 180
 aaaaaagaca ataaaatttt tcaatattac tctctttag aagaaagtga tataaaatat 240
 aaaacatcta aaaactttat caataaagta tacaaggcg gtttcaattc acttgtctta 300
 aacttttagt aaaaagaaga tctatcaca gatgaaatag aagaattg 348

<210> 787
 <211> 530
 <212> DNA
 <213> *Pseudomonas aeruginosa*

<400> 787
 tagctcgtgc atcaaaggaa tatcttccag catcaacatt taagatcccc aacgcaatta 60
 tcggcctaga aactggtgct ataaagaatg agcatcaggt tttcaaatgg gacgaaagc 120

caagagccat gaagcaatgg gaaagagact tgaccttaag aggggcaata caagtttcag 180
 ctgttcccgt atttcaacaa atcgccagag aagttggcga agtaagaatg cagaaatacc 240
 ttaaaaaatt ttcctatggc aaccagaata tcagtggtgg cattgacaaa ttctggttgg 300
 aaggccagct tagaatttcc gcagttaatc aagtggagtt tctagagtct ctatatttaa 360
 ataaattgtc agcatctaaa gaaaaccagc taatagtaaa agaggctttg gtaacggagg 420
 cggcacctga atatctagtg cattcaaaaa ctggtttttc tgggtgtgga actgagtcaa 480
 atcctggtgt cgcattggtg gttgggtggg ttgagaagga gacagaggtt 530

<210> 788
 <211> 322
 <212> DNA
 <213> *Proteus vulgaris*

<400> 788
 acactggctg aattaagtgc tgctacattg caatatagcg ataatacagc aatgaataag 60
 atattagatt atttaggcgg tccagccaaa gtcactcaat ttgcacgttc aattaatgat 120
 gtcacttata gccttgatcg taaagagcct gaattaaata cagcaattca tggtgatcct 180
 cgtgatacta cttctccaat tgcgatggct aaaagtcttc aagcactgac attaggcgat 240
 gcactaggtc aatctcagcg tcaacaactt gtgacttggg taaaaggtaa tacaacgggt 300
 gataacagta ttaaagcggg tt 322

<210> 789
 <211> 625
 <212> DNA
 <213> *Klebsiella oxytoca*

<400> 789
 ttatctgcaa cactgatttc cgctctgctg gcgttttccg ccccggggtt ttctgccgct 60
 gataatgtcg cggcgggtgg ggacagcacc attaaaccgc tgatggcaca gcaggatatt 120
 cccgggatgg cggttgccgt ctccgtaaag ggtaagccct attatttcaa ttatggtttt 180
 gccgatattc aggcaaaaaca gccggtcact gaaaatacac tatttgagct cggatctgta 240
 agtaaaactt tcacaggtgt gctgggtgcg gtttctgtgg cgaaaaaaga gatggcgctg 300
 aatgatccgg cggcaaaaata ccagccggag ctggctctgc cgcagtggaa ggggatcaca 360
 ttgctggatc tggctaccta taccgcaggc ggactgccgt tacaggtgcc ggatgcggta 420
 aaaagccgtg cggatctgct gaatttctat cagcagtggc agccgtcccg gaaaccgggc 480

gatatgctc tgtatgcaaa cagcagtatc ggcctgtttg gtgctctgac cgcaaacgcg 540
 gcggggatgc cgtatgagca gttgctgact gcacggatcc tggcaccgct ggggttatct 600
 cacaccttta ttactgtgcc ggaaa 625

<210> 790
 <211> 482
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 790
 gaaaattcac gtatgtcatg gaatcataag cattaccctt ttgatgcttg gaataaggaa 60
 caagatttaa atacagcaat gcaaaattca gtttaattggt acttcgaacg tattagcgat 120
 caaataccaa agaactatac tgcgactcaa ctcaagcaat taaattatgg taataaaaat 180
 ttgggaagtt ataaaagcta ttggatggaa gatagtttga aaatatctaa tcttgaacaa 240
 gtaatagttt ttaaaaatat gatggaacaa aataaccatt ttagtaaaaa agcaaagaat 300
 caattatctt cttcattatt gattaagaaa aatgaaaagt atgaactgta tgggaaaaca 360
 ggtacaggta tagtaaacgg gaagtataat aatgggtggt ttgtaggta cgtaattaca 420
 aatcatgata agtattatct tgctacacat ttatcagatg gaaagccatc tgggaaaaat 480
 gc 482

<210> 791
 <211> 703
 <212> DNA
 <213> *Pseudomonas aeruginosa*

<400> 791
 acgttctgac tggaggaagt ttttcagcga atttcaagcc aaaggcacga tagttgtggc 60
 agacgaacgc caagcggatc gtgccatggt ggtttttgat cctgtgcat cgaagaaacg 120
 ctactcgcct gcatcgacat tcaagatacc tcatacactt tttgcaactg atgcaggcgc 180
 tgttcgtgat gagttccaga tttttcgatg ggacggcgtt aacaggggct ttgcaggcca 240
 caatcaagac caagatttgc gatcagcaat gcggaattct actgtttggg tgtatgagct 300
 atttgcaaag gaaattggtg atgacaaagc tcggcctat ttgaagaaaa tcgactatgg 360
 caacgccgat ccttcgacaa gtaatggcga ttactggata gaaggcagca ttgcaatctc 420
 ggcgcaggag caaattgcat ttctcaggaa gctctatcgt aacgagctgc ctttccgggt 480
 agaacatcag cgcttggcca aggatctcat gattgtggaa gccggtcgc actggatact 540

gcgtgcaaaag acgggctggg aaggccgtat gggttggtgg gtaggatggg ttgagtggcc 600
gactggctcc gtattcttcg cactgaatat tgatacgcca aacagaatgg atgatctttt 660
caagagggag gcaatcgtgc gggcaatcct tcgctctatt gaa 703

<210> 792
<211> 758
<212> DNA
<213> *Klebsiella pneumoniae*

<400> 792
tcacgctggt gtttaggaagt gtgccgctgt atgcgcaaac ggcggacgta cagcaaaaac 60
ttgccgaatt agagcggcag tcgggaggca gactgggtgt ggcattgatt aacacagcag 120
ataattcgca aatactttat cgtgctgatg agcgctttgc gatgtgcagc accagtaaag 180
tgatggccgc ggccgcggtg ctgaagaaaa gtgaaagcga accgaatctg ttaaatcagc 240
gagttgagat caaaaaatct gaccttgta actataatcc gattgcgga aagcacgtca 300
atgggacgat gtcactggct gagcttagcg cggccgcgct acagtacagc gataacgtgg 360
cgatgaataa gctgattgct cacgttggcg gcccgctag cgtcaccgcy ttcgcccgac 420
agctgggaga cgaaacgttc cgtctcgacc gtaccgagcc gacgttaaac accgccattc 480
cggcgatcc gcgtgatacc acttcacctc gggcaatggc gcaaactctg cggaatctga 540
cgctgggtaa agcattgggc gacagccaac gggcgcagct ggtgacatgg atgaaaggca 600
ataccaccgg tgcagcagc attcaggctg gactgcctgc ttctggggt gtgggggata 660
aaaccggcag cggtgactat ggcaccacca acgatatcgc ggtgatctgg caaaagatc 720
gtgcgccgct gattctggtc acttacttca cccagcct 758

<210> 793
<211> 680
<212> DNA
<213> *Streptococcus pneumoniae*

<400> 793
cggaactgta taatcccttg aattccgtag aagattctac taatcggcgc gatactgtct 60
tgcagaatat ggttgcagca ggatatattg ataaaaacca agaaaccgaa gctgctgaag 120
ttgatatgac ttcgcaattg cacgataagt atgaaggaaa aatctcagat taccgttacc 180
cctcttattt tgatcgggtg gttaatgaag ctgtttccaa gtataatcta acagaggaag 240
agattgtcaa taatggctac cgcatTTaca cagagctgga caaaactac caagcaaata 300

tgcagattgt ttatgaaaac acatcgctat ttccgagggc agaggatgga acgtttgctc 360
 aatcaggaag tgtagctctc gaaccgaaaa cagggggagt tcgtggagtt gtcggcaag 420
 ttgctgacaa tgataaaaact ggattccgga atttcaacta tgcaacccaa tcaaagcgta 480
 gtcttggttc tacaattaag ctttagttg tttatacacc agcagttgaa gcaggctggg 540
 ctttgaataa gcagttggat aaccatacca tgcagtatga tagctataag gttgataact 600
 atgcagggat caaacaagt cgagaagttc ctatgtatca atccttggca gaatcgctta 660
 atctacctgc tgttgccact 680

<210> 794
 <211> 669
 <212> DNA
 <213> *Klebsiella pneumoniae*

<400> 794
 cgtaggcatg atagaaatgg atctggccag cggccgcaag ctgaccgctt ggcgcgccga 60
 tgaacgcttt cccatgatga gcaccttaa agtagtgctc tgcggcgcaag tgctggcgcg 120
 ggtggatgcc ggtgacgaac agctggagcg aaagatccac tatcgccagc aggatctggt 180
 ggactactcg ccggtcagcg aaaaacacct tgccgacggc atgacggctg gcgaactctg 240
 cgccgcccgc attaccatga gcgataacag cgccgccaat ctgctactgg ccaccgtcgg 300
 cggccccgca ggattgactg cttttttgag ccagatcggc gacaacgtca cccgccttga 360
 ccgctgggaa acggaactga atgaggcgct tcccggcgac gcccgcgaca ccaactaccc 420
 ggccagcatg gccgcgaccc tgcgcaagct gctgaccagc cagcgtctga gcgcccgttc 480
 gcaacggcag ctgctgcagt ggatggtgga cgatcgggtc gccggaccgt tgatccgctc 540
 cgtgctgccg gcgggctggt ttatcgccga taagaccgga gctggcgagc ggggtgcgcg 600
 cgggattgtc gccctgcttg gcccgaaataa caaagcagag cgcattgtgg tgatttatct 660
 gcgggatac 669

<210> 795
 <211> 551
 <212> DNA
 <213> *Salmonella typhimurium*

<400> 795
 cacgatagtt gtggcagacg aacgccaagc ggatcgtgcc atgttggttt ttgatcctgt 60
 gcgatcgaag aaacgctact gcctgcatac gacattcaag atacctcata cactttttgc 120

acttgatgca ggcgctgttc gtgatgagtt ccagatTTTT cgatgggacg gcgtaaacag 180
 gggctttgca ggccacaatc aagaccaaga tttgcatca gcaatgcgga attctactgt 240
 ttgggtgtat gagctatTTG caaaggaaat tggatgagac aaagctcggc gctatTTGaa 300
 gaaaatcgac tatggcaacg ccgatccttc gacaagtaat ggcgattact ggatagaagg 360
 cagccttgca atctcggcgc aggagcaaat tgcatttctc aggaagctct atcgtaacga 420
 gctgcccttt cgggtagaac atcagcgtt ggtcaaggat ctcatgattg tggaagccgg 480
 tcgcaactgg atactgcgtg caaagacggg ctgggaaggc cgtatgggtt ggtgggtagg 540
 atgggttgag t 551

<210> 796
 <211> 557
 <212> DNA
 <213> Staphylococcus haemolyticus

<400> 796
 agcttttgtt ttatatTTct attggtatta ttttttaggt acatattaaa acgctatTTT 60
 aattatatgt taaattataa agtttggtat ctaactcttc ttgcaggatt aattcctttc 120
 attcctatta aattctctct ttttaaattt aataatgtga ataatacaagc gccacagtt 180
 gaaagtaagt cacacgactt gaaccataac ataaatacca ccaaacctat tcaagagttc 240
 gcaacagata tccataagtt taattgggat tcaattgata atatctgcac agttatTTgg 300
 atagtttttag ttattatTTT aagtttttaa tttttgaaag cttattata tcttaaatat 360
 ttaaagaaac agtcacttta tctaaacgaa aatgaaaaaa ataaaataga tacgatactt 420
 ttcaaccatc aatataaaaa aaatattgtg attcgaaaag cagagactat tcaatctcca 480
 ataactTTTT ggtatgggaa atatattatt ttgattccta gttcatattt taaaagtgta 540
 attgacaaaa gactaaa 557

<210> 797
 <211> 558
 <212> DNA
 <213> Pseudomonas aeruginosa

<400> 797
 ttgacgaagg cgtttatggt catacttctt ttgaggaagt taacggctgg ggcgtggttc 60
 ctaaacacgg cttggtgggt cttgtaaata ctgacgctta tttgattgac actccattta 120
 cagctaaaga tactgaaaag ttagttactt ggtttgtaga gcgcggctat aaaataaaaag 180

gcagtatctc ctctcatttt catagcgaca gcacgggcyg aatagagtgg cttaattctc 240
aatctattcc aacatatgca tctgaattaa caaatgaact tcttaaaaaa gacggtaagg 300
tacaagctaa aaattcattt agcggagcca gctattgggt agttaagaaa aagattgaaa 360
ttttttatcc tggcccaggg cacactccag ataacgtagt ggtttggtta cctgaacata 420
gagttttggt tgggtggtgt tttgttaaac cgtatggtct aggtaatttg ggtgacgcaa 480
attdagaagc ttggccaaag tctgccaat tattagtgtc caaatatggt aaggcaaac 540
tggttgttcc aagtcaca 558

<210> 798
<211> 421
<212> DNA
<213> Staphylococcus aureus

<400> 798
ttaaagaatg gaaccaagat caaaatttaa attcctcaat gaaatattca gtaaattggt 60
attacgaaaa tttaaacaaa catttaagac aagatgaggt taaatcttat ttagatctaa 120
ttgaatatgg taatgaagaa atatcagga atgaaaatta ttggaatgaa tcttcattaa 180
aaatttctgc aatagaacag gttaatttgt tgaaaaatat gaaacaacat aacatgcatt 240
ttgataataa ggctattgaa aaagttgaaa atagtatgac tttgaaacaa aaagatactt 300
ataaatatgt aggtaaaact ggaacaggaa tcgtgaatca caaagaagca aatggatggt 360
tcgtaggtta tgttgaaacg aaagataata cgtattattt tgctacacat ttaaaggcg 420
a 421

<210> 799
<211> 260
<212> DNA
<213> Klebsiella oxytoca

<400> 799
gacaataaccg cgatgaataa gatgattagc taccttggcg gaccggaaaa ggtgaccgca 60
ttcgcccaga gtatcgggga tgctactttt cgtctcgatc gtacggagcc ggcgctgaac 120
agcgcgattc ccggcgataa gcgcgatacc accaccccggt tggcgatggc cgaaagcctg 180
cgcaagctga cgctgggcaa tgcgctgggc gaacagcagc gcgcccagtt agtgacgtgg 240
ctaaaaggca ataccaccgg 260

<210> 800

<211> 605
 <212> DNA
 <213> Streptococcus pyogenes

<400> 800
 aatcatcctc gtggctttga tcagcattta aaactactgt aataaccctc atttgatfff 60
 cgacactagt agctacaaaa gaagcaccgg cttttttaga ataaccaaca aaaagaccat 120
 ccacgccttc tcgataacaa ggcattgcctt taagcattga attataactg taaatggfff 180
 gtccagcaaa aatagtgagg gatttgctag ataatttcag tacttctgga aattctaata 240
 agagatgcct ggcaataaca gctaaatcag tggcgcaaaa acaattttca tcatctggtt 300
 ctgtattagg ataagtatta gctcctaaaa aatggttagt taagccagtt gaattgacga 360
 cctttgcatc ggaaatgccc cattgtctta attgtttttt cattttgtca acaaatttgg 420
 gttcggttcc gcctattttt tcagctaaag caatagcggg gctattggcg ttattaacaa 480
 ctaacgcact taaaagttct ttaacggtat attttctctt atcaagagga acattactaa 540
 tagtatagtt tgtagtgagt tcataagggt agttagaat agttacagga ctatccaat 600
 ttagc 605

<210> 801
 <211> 713
 <212> DNA
 <213> Staphylococcus aureus

<400> 801
 tacagtcatt tcacgcaaac tggtggccac tatgagttaa agcttgctga aggttatgaa 60
 acacatttag tgggaataaa gaacaataat aacgaggtca ttgcagcttg cttacttact 120
 gctgtacctg ttatgaaagt gttcaagtat ttttattcaa atcgcggtcc agtgatcgat 180
 tatgaaaatc aagaactcgt acactttttc tttaatgaat tatcaaaata tgttaaaaaa 240
 catcgttgtc tatactaca tatcgatcca tatttaccat atcaatactt gaatcatgat 300
 ggcgagatta caggtaatgc tggtaatggt tggttctttg ataaaatgag taacttagga 360
 tttgaacata ctggattcca taaaggattt gatcctgtgc taaaaattcg ttatcactca 420
 gtgttagatt taaaagataa aacagcagat gacatcatta aaaatatgga tggacttaga 480
 aaaagaaaca cgaaaaaagt taaaaagaat ggtgttaaag taagatattt atctgaagaa 540
 gaactaccaa ttttagatc attcatggaa gatcgtcag aatcaaaagc ttttctgat 600
 cgtgatgaca agttttatta caatcgctta aatattaca aagaccgtgt gttagtgcct 660

ttagcgtata tcaatsttga tgaatatatt aaagaactaa atgaagagcg tga 713

<210> 802
 <211> 715
 <212> DNA
 <213> Staphylococcus aureus

<400> 802
 agttgtagtt gtcgggtttg gtatatatstt ttatgcttcc aaagataaag aaattaataa 60
 tactattgat gcaattgaag ataaaaatstt caaacaagtt tataaagata gcagttatat 120
 ttctaaaagc gataatggtg aagtagaaat gactgaacgt ccgataaaaa tatataatag 180
 tttaggcggt aaagatataa acattcagga tcgtaaaata aaaaaagtat ctaaaaataa 240
 aaaacgagta gatgctcaat ataaaattaa aacaaactac ggtaacattg atcgcaacgt 300
 tcaatttaat tttgttaaag aagatggtat gtggaagtta gattgggatc atagcgtcat 360
 tattccagga atgcagaaag accaaagcat acatattgaa aatttaaaat cagaacgtgg 420
 taaaatttta gaccgaaaca atgtggaatt ggccaataca ggaacagcat atgagatagg 480
 catcgttcca aagaatgtat ctaaaaaaga ttataaagca atcgctaaag aactaagtat 540
 ttctgaagac tatatcaaac aacaaatgga tcaaaattgg gtacaagatg ataccttcgt 600
 tccacttaaa accgttaaaa aaatggatga atatttaagt gatttcgcaa aaaaatttca 660
 tcttacaact aatgaaacag aaagtcgtaa ctatcctcta ggaaaagcga cttca 715

<210> 803
 <211> 360
 <212> DNA
 <213> Staphylococcus haemolyticus

<400> 803
 gccaaataagc aagttgaaat atctatggct gaatgggatg ttatgaaat aatatgggat 60
 aaaaaatcag tatcagctaa tgaaattgta gttgaaattc aaaaatataa agaagttagc 120
 gataaaaacga ttagaacatt aatcacaaga ctatataaaa aagagattat aaaacgatac 180
 aatcagaga atatttattt ttactcatca aatattaaag aagacgatat taaaatgaaa 240
 actgctaaaa cctttcttaa taaactgtat ggaggggaca tgaaaagttt agtgctgaat 300
 tttgcgaaaa atgaagaatt aaataacaaa gaaattgaag aattgcgaga cattttaat 360

<210> 804
 <211> 300
 <212> DNA

<213> *Pseudomonas aeruginosa*

<400> 804

catgctgta aatcatcgtc gtagagacgt cggaatggcc gagcagatcc tgcacggttc 60
 gaatgtcgta accgctgcgg agcaaggccg tcgcgaacga gtggcggagg gtgtgcggtg 120
 tggcgggctt cgtgatgcct gcttgttcta cggcacgttt gaaggcgcgc tgaaaggctc 180
 ggtcatacat gtgatggcga cgcacgacac cgctccgtgg atcggtcgaa tgcgtgtgct 240
 gcgcaaaaac ccagaaccac ggccaggaat gcccggcgcg cggatacttc cgctcaaggg 300

<210> 805

<211> 500

<212> DNA

<213> *Streptococcus pneumoniae*

<400> 805

tgaggaagggt agtaaggga acaatatcaa actgaccatt gatttggcct tccaagatag 60
 cgtggatgct ttactgaaaa gttatttcaa ttctgagcta gaaaatggtg gagccaagta 120
 ttctgaagggt gtctatgcag tcgcccttaa ccaaaaaaca ggtgcggttt tgtctatgtc 180
 agggattaaa catgacttga aaacaggaga gttgacgctt gattccttgg gaacggtaac 240
 caatgtcttt gttccagggt cggttgtcaa ggcggcgacc atcagctccg gttgggaaaa 300
 tggagtctta tcaggaacc agacctgac agaccaaccg attgtcttcc aaggttcagc 360
 tccgattaat tcttggata ctcaagccta cgattcattc ccgattacag ctgtggaggc 420
 cttggagtat tcttctaag cctatatggt tcaaacggct ttgggcatta tgggtcagac 480
 ctatcaacc aatatgtttg 500

<210> 806

<211> 565

<212> DNA

<213> *Staphylococcus epidermidis*

<400> 806

tagcaataca atgcacata cattaataga gaaaaagaaa aaagatggca aagatattca 60
 actaactatt gatgctaaag ttcaaaagag tatttataac aacatgaaaa atgattatgg 120
 ctcagggtact gctatccacc ctcaaacagg tgaattatta gcacttghta gcacaccttc 180
 atatgacgtc tatccattta tgtatggcat gagtaacgaa gaatataata aattaaccga 240
 agataaaaaa gaacctctgc tcaacaagtt ccagattaca acttcaccag gttcaactca 300
 aaaaatatta acagcaatga ttgggttaaa taacaaaaa ttagacgata aaacaagtta 360

taaaatcgat ggtaaaggtt ggcaaaaaga taaatcttgg ggtggttaca acgttacaag 420
 atatgaagtg gtaaattggta atatcgactt aaaacaagca atagaatcat cagataacat 480
 tttctttgct agagtagcac tcgaattagg cagtaagaaa tttgaaaaag gcatgaaaaa 540
 actaggtggt ggtgaagata tacca 565

<210> 807
 <211> 524
 <212> DNA
 <213> Streptococcus pneumoniae

<400> 807
 tgaagatggc agcaagagct tgctgggaac ttctggaatg gagagttcct tgaacagtat 60
 tcttgagggg acagacggca ttattaccta tgaaaaggat cgtctgggca atattgtacc 120
 cggaacagaa ctggtatcgc acaaaactgt ggatggcaag gatgtttata caacattgtc 180
 tagtccgcta caatctttca tggaaactca gatggatgcc tttctagaaa aagtaaaagg 240
 taagtatatg accgcgacct tggtcagtgc aaagaccggg gaaattctcg ctaccacca 300
 acgacctacc tttaatgcag atactaaaga aggaatcact gaggactttg tttggcgtga 360
 tattctttat caaagtaact atgaaccagg atcagccttt aaggatcatga tgttagcttc 420
 ttctattgat aataatacct tccaagtgg agaatacttc aatagcagtg aattcaaaat 480
 agcggatgcg acgactcgag attgggatgt taatgagggt ttga 524

<210> 808
 <211> 715
 <212> DNA
 <213> Staphylococcus aureus

<400> 808
 agagatgaat gcaggaacag ttttagatcc acaaatgata aaaaatgaag atgtcagtga 60
 aaaagagtat gcagcagttt ctacgcaact ttccaaatta ccaggtgta acacgtctat 120
 ggattgggat agaaaatc catatggcga tactttaaga ggtatattcg gagatgtatc 180
 gacacctgct gaaggtatc caaaagaatt gacagaacat tacttatcca aaggatattc 240
 acgcaatgat cgtgttgaa aatcttacct agaatatcaa tatgaagatg tattgcgtgg 300
 taagaagaaa gaaatgaaat acacaacgga caaatctggt aaagttacat cttcagaagt 360
 gttaaactct ggcgctcgcg gtcaagatct gaaattaacg atcgatatag atcttcaaaa 420
 agaagtagaa gcattattag ataaacaaat taagaagctt cgcagtcaag gtgccaaga 480

tatggataat gcaatgatgg ttgtacaaaa tcttaaaaat ggagacattc ttgcgcttgc 540
 cggaaaagcag attaataaga gtggtaaaat gactgattat gacattggta cgtttacttc 600
 tcaatttgcg gttggatctt ctgtaaaaag tggaacatta ttagccggtt atcagaataa 660
 agctatcaaa gttggagaaa caatggtcga tgaaccatta catttccaag gtggt 715

<210> 809
 <211> 623
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 809
 caaacaagaa ttagccgaag cgaagaaaac agctactaca tttttaaagc tattgtcaaa 60
 acaggaatth gataagttac cgtccgttgt tcaagaagct agcttaaaga aaaatggcta 120
 tgatactaaa tctgtttgtg aaaaatacca agcaattht ttagggattc aagcagaagg 180
 agtcaaagct agtgatgttc aagtcaaaaa ggcgaaagac aatcaataca catttaccta 240
 taaattatcg atgagcactc ctttaggcga aatgaaagat ttgtcttata aatcaagtat 300
 cgccaagaaa ggcgatacct accaaatcgc ttggaagcgc tctttaatth ttccagatat 360
 gtcaggaaat gataaaatth cgattcaagt agataatgcc aaacgtggag aaattgtcga 420
 tcgtaatggt agtgggctag caattaacaa agtgtttgac gaagtgggag tagtgcctgg 480
 caaactcggg tctggcgcag aaaaaacagc caatatcaaa gcttttagtg ataagttcgg 540
 cgtttctggt gatgaaatca atcaaaagtt aagccaagga tgggtccaag cagactcctt 600
 tgtaccaatc acagttgctt ctg 623

<210> 810
 <211> 660
 <212> DNA
 <213> *Enterococcus faecium*

<400> 810
 tacagatgca gacggtgtag agaaaaagc tctgatcgaa catgaagttc aaaatggcaa 60
 agatatcaaa ttgacaatcg atgcgaaggc acaaaaaaca gcttttgaca gtctaggagg 120
 aaaagctgga tcaactgttg cgacaacgcc aaaaaccggt gatcttcttg cgcttgctag 180
 ctctccaagc tatgatccaa acaaaatgac aaacgggata tcacaagaag attacaaagc 240
 ttatgaagaa aatcctgaac agccattcat cagccgattt gcgacagggt atgctcctgg 300
 atctacgtht aaaatgatta cagcagcaat cgggtctgac aacggcacta tcgatccaaa 360

tgaagtgttg acgatcaacg ggcttaaatg gcaaaaagac agttcttggg gatcttatca 420
 agtaacgcgt gtcagtgatg tatcacaagt agacttaaaa actgctttga tctattccga 480
 taatatatat acggccaag aaacgttgaa aatgggtgag aaaaaatttc gtacaggctt 540
 agataaattc atttttggtg aagaccttga tttgccaatt agtatgaatc cagcacaat 600
 ttctaataag gatagcttta actcagatat cttgctagct gatactggat atggacaggg 660

<210> 811
 <211> 522
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 811
 gccggtgtat cactaaagga aaaaacagct tctctatatg aaggaaagca agtggtaaaa 60
 gctaagcgag gatcaatddd agatcgatat ggtaatccaa ttgcagaaga tgctacttcc 120
 tattcgttat atgtcgtatt atcaaaaaaa tatacgggac aaaataatga aaagctatac 180
 gcggagaaaa aagacttoga tgatattgct gaaatdddtag cgaatatatac caaactagac 240
 aaaaaaacag cattgaataa cttgaataat gggatccatg aagatggggtc aacacaatat 300
 caagtggat ttggtacggg tggtaaaaac atcaccttgg aaacacgcca aaaaattgaa 360
 gcgatttga aaaagaaaaa aattdcaggt gtttatttca atgaacatcc agccagatta 420
 tatccaatg gtcagtttgc ttctcacttt attggctata caaaagcagc caatccagat 480
 gatgataaag aaggcttagt aggagcaatg ggactagaac ag 522

<210> 812
 <211> 332
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 812
 taataaaacg tatgaaatat catctgcaga atgggaagtt atgaaatca tttggatgaa 60
 aaaatatgca agtgcgaata atataataga agaaatacaa atgcaaaagg actggagtcc 120
 aaaaaccatt cgtacactta taacgagatt gtataaaaag ggatttatag atcgtaaaaa 180
 agacaataaa attttttaat attactctct tgtagaagaa agtgatataa aatataaaac 240
 atctaaaaac tttatcaata aagtctacaa aggcggtttc aattdcacttg tcttaaaact 300
 tgtagaaaaa gaagatctat cacaagatga aa 332

<210> 813
 <211> 530
 <212> DNA
 <213> *Streptococcus pneumoniae*

<400> 813
 cttggttagc gattcagtta gaacaaaaag caaccaagca agaaatcttg acctactata 60
 taaataaggt ctacatgtct aatggcaact atggaatgca gacagcagct caaaactact 120
 atggtaaaga cctcaataat ttaagtttac ctgagttagc cttgctggct ggaatgcctc 180
 aggcaccaa ccaatatgac ccctattcac atccagaagc agcccaagac cgccgaaact 240
 tggctttatc tgaaatgaaa aatcaaggct acatctctgc tgaacagtat gagaaagcag 300
 tcaatacacc aattactgat ggactacaaa gtctcaaatc agcaagtaat taccctgctt 360
 acatggataa ttacctcaag gaagtcacat atcaagttga agaagaaaca ggatataacc 420
 tgctcacaac tgggatggat gtctacacaa atgtagacca agaagctcaa aaacatctgt 480
 gggatattta caatacagac gaatacgttg cctatccaga cgatgaattg 530

<210> 814
 <211> 355
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 814
 agcaagttga aatatctatg gctgaatggg atgttatgaa tataatatgg gataaaaaat 60
 cagtatcagc taatgaaatt gtagttgaaa ttcaaaaata taaagaagtt agcgataaaa 120
 cgattagaac attaatcaca agactatata aaaaagagat tataaaacga tacaatcag 180
 agaatattta ttttactca tcaaatatta aagaagacga tattaaatg aaaactgcta 240
 aaacctttct taataaactg tatggagggg acatgaaaag tttagtgtg aattttgcga 300
 aaaatgaaga attaaataac aaagaaattg aagaattgcg agacatttta aatga 355

<210> 815
 <211> 702
 <212> DNA
 <213> *Escherichia coli*

<400> 815
 acatcgaact ggatctcaac agcggtaaga tccttgagag ttttcgcccc gaagaacggt 60
 ttccaatgat gagcactttt aaagttctgc tatgtggtgc ggtattatcc cgtgttgagc 120
 ccgggcaaga gcaactcggg cgccgcatac actattctca gaatgacttg gttaagtact 180

caccagtcac agaaaagcat cttacggatg gcatgacagt aagagaatta tgcagtgctg 240
 ccataaccat gaggataac actgctgcca acttacttct gacaacgatac ggaggaccga 300
 aggagctaac cgcttttttg cacaacatgg gggatcatgt aactcgcctt gatcgttggg 360
 aaccggagct gaatgaagcc ataccaaaacg acgagcgtga caccacgacg cctgcagcaa 420
 tggcaacaac gttgcgcaaa ctattaactg gcgaactact tactctagct tcccggcaac 480
 aattaataga ctggatggag gcgataaag ttgcaggacc acttctgcgc tcggcccttc 540
 cggctggctg gtttattgct gataaatctg gagccggtga gcgtgggtct cgcggtatca 600
 ttgcagcact ggggccagat ggtaagccct cccgtatcgt agttatctac acgacgggga 660
 gtcaggcaac tatggatgaa cgaaatagac agatcgcctga ga 702

<210> 816
 <211> 596
 <212> DNA
 <213> *Klebsiella oxytoca*

<400> 816
 tgtgcagcac cagtaaagtg atggccgccc cgcggtatt aaaacagagc gaaagcaata 60
 aagagggtgt aaataaaagg ctggagatta acgcagccga tttggtggtc tggagtccga 120
 ttaccgaaaa acatctccag agcggaatga cgctggctga gctaagcgcg gcgacgctgc 180
 aatatagcga caatacggcg atgaatctga tcacggcta ccttggcggg ccgaaaaag 240
 tcaccgcctt cgcccgcagt atcggcgatg ccaccttctg tctcgatcgt acggagccca 300
 cgctgaatac cgccatcccg ggcgatgagc gtgataccag cacgccgctg gcgatggctg 360
 aaagcctacg caagctgacg cttggcgatg cgctgggcca acagcaacgc gccagttag 420
 tcacctggct gaaaggcaat accaccggcg ggcaaagcat tcgcgcgggc ctgcctgaaa 480
 gctgggtggc cggcgataaa accggcgccg gagattacgg caccaccaat gatattgcgg 540
 ttatctggcc ggaagatcac gctccgctgg tattagtac ctactttacc cagccg 596

<210> 817
 <211> 558
 <212> DNA
 <213> *Enterococcus faecium*

<400> 817
 acagtgccag ttcttatcgt ttattgcaag ccgatgaaaa taaaaaagt ctattattgc 60
 gtcaactaat tttcatatct ttgagttgga gcgtgatcct cttagctcgt tcagtcaaac 120

tacactatth acttcaccct aaaatagcag gatacggthh agccttatcg atthtctthh 180
tagtattagt aagaataggg atattcggth tcactgtcaa cggcgcaaa cgttgatct 240
ctctgthhgg cattcaattc cagcctctg aactggcaaa tctthhthhgg atthhthatt 300
taagctggtt thhctgtgac ggaaatagta gcccaaaaga tctaaaaaa ccattcctga 360
ttacagtagg tataactthh ctgathhtht ttcagcaaa gattgctgga gcattgatga 420
tcctthcgat tgcgtgggth atathhthgg cagcggcggth tccatttaa aaaggatct 480
atctaatcgt tactthhthct gcattgctga ttggagcagc aggcggggta ttatathhag 540
gaaataaagg ttgcttc 558

<210> 818
<211> 750
<212> DNA
<213> *Staphylococcus aureus*

<400> 818
ctcaccaaa tggagattta ttacaattaa cgaaatggc agaaacaaag aaattaactg 60
gatggtacgc gcgaagaatc gctgtaggth gtgacggth agttcagggt gttgcgcaat 120
tactthhthaa aaaagtacct aaattacct atacgctatg ttatathhca cgtgthhthg 180
ttgthgatta tagtaataaa gaagcgttaa atgcattgth agacagtgca aaagaaathg 240
ctaaagctga gaaagcgtat gcaattaaaa tcgatcctga tghtgaagth gataaaggta 300
cagatgctth gcaaaathhgg aaagcgtth gthhthaaaca taaaggathh aaagaagthh 360
tatcaaaaga ctacatccaa ccacgtatga ctatgathh accaathhag aaaaathhag 420
atgagthatt aaatagthhth gaacgcgcaa atcgtthcaaa agtgcgctth gctthaaagc 480
gaggtacgac agtagaacga tctgatagag aagthhthaa aacathhthgct gaathhathg 540
aatcactgg ggaacgcgat ggctthhthaa cgcgtgathh tagthhactth gaaaathhth 600
atgatgcgth gcathhagat ggagatgctg aactathhthh agthaaagthh gacccaaaag 660
aaaathhagc gaaagthaat caagaathhga atgactthca tgccgaaata gctaaathhggc 720
agcagaagat ggaacathhct gaaaagcaag 750

<210> 819
<211> 363
<212> DNA
<213> *Proteus vulgaris*

<400> 819

acaacatttc gccaaacagc gacgattgca gtttcattaa tatctctatt ggtatctcca 60
atgctatggg ctaacaccaa taatacgatt gaagagcaat taagtagcgt tgaaaaatat 120
agccaaggtc gtttaggtgt tgctttaatc aacacggaag ataattcaca aataacatat 180
cgtggtgaag aacgttttgc gatggcaagt acaagtaagg ttatggctgt tgcggcagtt 240
ttaaagaga gtgaaaaaca agcgggatta ttagataaga atattacaat taaaaaatcc 300
gacttagttg cttacagccc tattacagaa aaacatttag taacaggaat gtctttagct 360
caa 363

<210> 820
<211> 545
<212> DNA
<213> *Staphylococcus haemolyticus*

<400> 820
aatgatggct ttgaagtagt gttactaggt gtaaaagatg aaagcaataa agtattagct 60
gctagtcttt tctctaaaat accgaccatg ggaagttatg tatattactc aaatcgaggc 120
ccagtaatgg actattctga tttaggttta gttgattttt acttacgcga attagaaaag 180
tattacatc aacaccaatg tttatacggt aaaattgatc catactggat ttatcaaatt 240
tatgataaag atattaatcc acttgaagat agagagaaaa atgatgctat agttaatttg 300
tttaaatac atggatatga acaccatgga tttactactg aatatgacac atcaagtcaa 360
gcaagatgga tgggtgtag ctatctaaaa ggggaaacac ctgcttcatt aagaaaacaa 420
tttgatagcc aacgtaaaag aaatattaat aaagcgataa actatggggg gaaagtaaga 480
ttccttggtg gagatgagtt tcatatattc ttagacttat accgtgaaac .agaagcaaga 540
acagg 545

<210> 821
<211> 633
<212> DNA
<213> *Pseudomonas aeruginosa*

<400> 821
ccatcaggca acagaatgat acctaaatca ttagtgccg cagtttttcc ggctttgata 60
cccgaagtac cagttttatg tgcgaccaca gtaccagctg gtaacaaacc tttaaccgc 120
tctggtcctg tgggtggttc gaccatccac ttccataaca aagcctgcga ggtttcagac 180
agctgtggtt tttgctcaaa ctttttcagg atctctgcag cacctttcat cgaggtccag 240

ttttgatact gcacctgatac atcggcgctgc atctgcgctt catttgcgac cacagcggtc 300
 tcctttatac ccatagactg gatatagta tgcaaagcag ctgggccacc aaccagttca 360
 aataacaaat cacaggccac gttatcgctg tgcgagaccg agtattgcag cagttgctgc 420
 actggaacac taaactcgtc tccctgatac gctttcatta tcggagccca ggtattctgt 480
 aaaaccttag ccctgtttac gataacggtc tgatttaaat ccaactttcc ctgatcaacc 540
 tgatgcagta ccaacatagc taaatgcaat ttaaatacac tttgcattgg gaattttca 600
 aaaggattaa tcagtaaagg ttccagatcg tca 633

<210> 822
 <211> 340
 <212> DNA
 <213> *Klebsiella oxytoca*

<400> 822
 cttactatcg gagctggta cgggtttatc cggcagggac tcatcgccag tattccaacc 60
 ccagcatagg cctgtttggc cacctggccg caaatagtct gggccagcca tttgagcaac 120
 tgatgagcca gaccctgctg cccaagctgg gtttgacca cacctatatac caggtgccgg 180
 agtcggccat ggcgaactat gcctacggct attcgaagga agataagccc atccgggtca 240
 ctccggcgt gctggcggcc gaggcttacg ggatcaagac cggctcggcg gatctgctga 300
 agtttgccga ggcaaacatg gggatcagg gagatgcct 340

<210> 823
 <211> 768
 <212> DNA
 <213> *Proteus vulgaris*

<400> 823
 tcactcatta accattgctg aaatatttcc attgatgctg tcattggctt tgattttaa 60
 tatgttagcc aatattttcc catttcaact tctattttaa agggttgcac taactgacca 120
 ttttcaattt ctcttgaaaa catttttgcg ggtgctaata caactcctcc ttcataaata 180
 gcgctttcaa tcattaagcg tgaagagta aaaatagagc cgttatttt tataggcgac 240
 atatttgctt tttcaacca ttgcaaccac tcatcttctc gataagagcg atacaagttt 300
 tcatttatta gatcagttgg atgttgtaaa cgtttcgccg taccgatga acacaatacc 360
 gttaatggtg cagaaaataa tgctttgtta tgagttaatg gccataaacc ttcaccaa 420
 cgaatagcaa aatctaatac ttcagtagcc aaattgacca cattattatt tgttcttaa 480

ttcacttcta ttcttgata taactgccta aattcggcca acctaggtaa taaccaccca 540
accgcaaatg taccgacagc tgcaattgaa acaacatcgc gatattcacc gcgttcaaat 600
tgtttaaata cacgctcaat atcactaaaa gccgttgta atacagaaa taagatttga 660
gcatcatccg tcatttctaa acctcgaggt aagcgcttaa aaagaataac gccagccgc 720
tcttctaaca ttctcacttg ttggctaaca gcaccttgag tgacatac 768

<210> 824
<211> 568
<212> DNA
<213> *Enterococcus faecium*

<400> 824
ttatctggtt tgttactgct tacactagta gtcggctttt tttcgattga atttgtccat 60
ggattttcgt ctgcaaaaaca gacctcaacc gtaaaaaagg tagatccgaa aagtgtccct 120
accacactaa atgtggcttt gattggttcg gatgcccggt cgaaagaaga aaatggtcgc 180
tcagattcac ttatggttgc acaatacagc cagaaaacac aacaagcaaa actaatctct 240
atcatgagag actcatatgt cgatatacca ggttacggaa tggataaaat caatgcagcg 300
tactcttacg gaggaattga tttattgaac caaacattaa aggaaaattt caaatttgaa 360
gccccgtatt atgcaagtat cacatttcaa gattttatcg attgctcaa tgaactgttt 420
cctgatggag taaagattga tgcagaaaaa tctttagatt tagatggcgt atatataaaa 480
aaaggaagc aagtaatgga tggcaatagc ttactgcagt atgctcgatt ccgtgaagac 540
gaagaagggg actttgggag gattagaa 568

<210> 825
<211> 763
<212> DNA
<213> *Staphylococcus aureus*

<400> 825
tgacttcgga tgagttcaat gcgtttacaa caaagcattt ttcacattac acacaatcag 60
ctattcatta caatcataga gttgatttaa aaggcgatgt gcatcttgta ggggttaaag 120
atgacaatgg tcaagtgatt gcaggatgct tattgacaga agcacgcaca cttaaatttt 180
tcaaatattt ttatacacat cgcgggccag tgatggatta tacaatcaa tcattagtag 240
catttttctt taaagcatta acgtcatatt taaagaaca caattgttta tatgtccttg 300
tagatccata tttaattgaa aatttacgca atgcagacgg tgaattggtt aaatcttatg 360

ataaccgagc atttgtaga acaatggata aattaggtta taaacaccaa ggtttccctg 420
 taggttatga ttcaatgagc caaatccggt ggctgtcagt gttagattta aaagataaga 480
 ctgaagacca acttttataa gaaatggatt atcaaacgag acgtaatatt aaaaaacat 540
 atgatattgg tgtcaaaact aaaacgtaa cgattgatga aacgcaaact tttttcgact 600
 tattccatat ggctgaggaa aagcacggtt tcaaattccg tgagttacca tactttgaag 660
 aatgcaaaa gttatacgat gaccacgcca tgtaaagtt ggcgtatatt gatttaaagc 720
 agtatttaaa aacgttaca ttaaagcaac aacaattaac agc 763

<210> 826
 <211> 552
 <212> DNA
 <213> *Staphylococcus epidermidis*

<400> 826
 aagtataatc agttcattgc tcacgatatg tgtaattttt ttagtgagaa tgctctatat 60
 aaaatatact caaaatatta tgtcacataa gatttggtta ttagtgctcg tctccacggt 120
 aattccatta ataccatfff acaaaatadc gaatfffaca ttttcaaaag atatgatgaa 180
 tcgaaatgta tctgacacga cttcttcggt tagtcatatg ttagatggtc aacaatcatc 240
 tgttacgaaa gacttagcaa ttaatgtaa tcagtttgag acctcaata taacgtatat 300
 gattcfffmg atatgggtat ttggtagttt gttgtgctta ttttatatga ttaaggcatt 360
 cggacaaaatt gatgttatta aaagttcgtc attggaatcg tcatatctta atgaacgact 420
 taaagtatgt caaagtaaga tgcagttcta caaaaagcat ataacaatta gttatagttc 480
 aaacattgat aatccgatgg tatttggttt agtgaaatcc caaattgtac taccaactgt 540
 cgtagtcgaa ac 552

<210> 827
 <211> 810
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 827
 tgctttagtt ttaagtgcac gtaattcaaa cagttcacat gccaaagagt taaatgattt 60
 agaaaaaaaa tataatgctc atattgggtg ttatgcttta gatactaaaa gtgtaagga 120
 agtaaaatft aattcagata agagatttgc ctatgcttca acttcaaaag cgataaatag 180
 tgctatfttg ttagaacaag taccttataa taagttaaat aaaaaagtac atattaacaa 240

agatgatata gttgcttatt ctcctatfff agaaaaatat gtaggaaaag atatcactff 300
 aaaagcactt attgaggctt caatgacata tagtgataat acagcaaaca ataaaattat 360
 aaaagaaatc ggtggaatca aaaaagttaa acaacgtcta aaagaactag gagataaagt 420
 aacaaatcca gttagatatg agatagaatt aaattactat tcaccaaaga gcaaaaaaga 480
 tacttcaaca cctgctgctt tcggtaaagac tftaaataaa cttatcgcaa atggaaaatt 540
 aagcaaagaa acaaaaaaat tcttacttga tftaatgtta aataataaaa gcggagatac 600
 tftaattaaa gacggtgttc caaaagacta taaggttgct gataaaagtg gtcaagcaat 660
 aacatatgct tctagaaatg atgttgctff tgtttatcct aaggccaat ctgaacctat 720
 tgttttagtc atftttacga ataaagacaa taaaagtgat aagccaaatg ataagttgat 780
 aagtgaaacc gccaaagagt taatgaagga 810

<210> 828
 <211> 565
 <212> DNA
 <213> Plasmid RGN238

<400> 828
 tttgaaggaa ctgaaggttg tftfttactt tacgatgcat ccacaaacgc tgaaattgct 60
 caattcaata aagcaaagtg tgcaacgcaa atggcaccag attcaactff caagatcgca 120
 ttatcactta tggcatttga tgcggaaata atagatcaga aaacctatft caaatgggat 180
 aaaaccccca aaggaatgga gatctggaac agcaatcata caccaaagac gtggatgcaa 240
 tfttctgttg tttgggttfc gcaagaaata acccaaaaaa ttagattaaa taaaatcaag 300
 aattatctca aagattfttga ttatggaaat caagacttct ctggagataa agaaagaaac 360
 aacggattaa cagaagcatg gctcgaaagt agcttaaaaa tftcaccaga agaacaaatt 420
 caattcctgc gtaaaattat taatcacaat ctcccagtta aaaactcagc catagaaaac 480
 accatagaga acatgtatct acaagatctg gataatagta caaaactgta tgggaaaact 540
 ggtgcaggat tcacagcaaa tagaa 565

<210> 829
 <211> 226
 <212> DNA
 <213> *Klebsiella pneumoniae*

<400> 829
 ggcttacggg atcaagaccg gctcggcgga tctgctgaag tttgccgagg caaacatggg 60

gtatcagga gatgccgcg taaaaagcgc gatcgcgctc acccacaccg gtttctactc 120
 ggtgggagac atgaccagg gactgggctg ggagagtac gcctatccgg tgaccgagca 180
 gacattgctg gcgggtaacg caccggcggg gagcttccag gccaat 226

<210> 830
 <211> 502
 <212> DNA
 <213> *Proteus mirabilis*

<400> 830
 gcggtaaagat ccttgagagt ttctgccccg aagaacgttt tccaatgatg agcactttta 60
 aagttctgct atgtggtgcg gtattatccc gtgttgacgc cgggcaagag caactcggtc 120
 gccgcataca ctattctcag aatgacttgg ttaagtactc accagtcaca gaaaagcacc 180
 ttacggatgg catgacagta agagaattat gcagtgctgc cataaccatg agtgataaca 240
 ctgvcggcaa cttacttctg acaacgatcg gaggaccgaa ggagctaacc gcttttttgc 300
 acaacatggg ggatcatgta acccgccttg atcgttggga accggagctg aatgaagcca 360
 taccaaacga cgagcgtgac accacgacgc ctgcagcaat ggcaacaacg ttgcgcaaac 420
 tattaactgg cgaactactt actctagctt cccggcaaca attaatagac tggatggagg 480
 cggataaagt tgcaggacca ct 502

<210> 831
 <211> 391
 <212> DNA
 <213> *Staphylococcus warneri*

<400> 831
 agttgaaaat gaaatatgta taagaacttt aatagatgat gattttcctt tgatgttaaa 60
 atggttaact gatgaaagag tattagaatt ttatggtggt agagataaaa aatatacatt 120
 agaatcatta aaaaaacatt atacagagcc ttgggaagat gaagttttta gagtaattat 180
 tgaatataac aatgttccta ttggatatgg acaaatatat aaaatgtatg atgagttata 240
 tactgattat cattatccaa aaactgatga gatagtctat ggtatggatc aatttatagg 300
 agagccaaat tattggagta aaggaattgg tacaagatat attaaattga tttttgaatt 360
 tttgaaaaaa gaaagaaatg ctaatgcagt t 391

<210> 832
 <211> 380
 <212> DNA

<213> *Pseudomonas aeruginosa*

<400> 832

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tcattcgcac atgtaggctc ggccctgacc aagtccaatc catgcgggct gctcttgatc      60
ttttcggctc tgagttcggg gacgtagcca cctactocca acatcagccg gactccgatt      120
acctcgggaa cttgctcctg agtaggacat tcatcgcgct tgctgccttc gagcaagaag      180
cggttgttgg cgtctcgcg gcttacgttc tgcccaagtt tgagcaggcg cgtagtgaga      240
tctatatcta tgatctcgca gtctccggcg agcaccgcgc gcagggcatt gccaccgcgc      300
tcatcaatct cctcaagcat gaggccaacg cgcttgggtc ttacgtgatc tacgtgcaag      360
cggattacgg tgacgatccc                                     380
```

<210> 833

<211> 616

<212> DNA

<213> *Escherichia coli*

<400> 833

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gaccgatcac cctacgagga gactcgtaat ggcgctcggg tggatgacaa aaccgcctg      60
acctggccgc cgttcgatcc cgcaacggcc gggacttacc gtgggttcgg cctgctgaat      120
cagtttctgg ttcaagcccc cggcgcgcgg cgacgcgcgc accccgatgc atcgatggtc      180
gcggttggtc cactggctga aacgctgacg gagcctcaca agctcgggtc cgccttgggg      240
gaagggtcgc ccgtcgagcg gttcgttcgc cttggcggga aggccctgct gttgggtgcg      300
ccgctaaact ccgttaccgc attgcactac gccgaggcgg ttgccgatat cccaacaaa      360
cggcgggtga cgtatgagat gccgatgctt ggaagcaacg gcgaagtcgc ctggaaaacg      420
gcacgcgatt acgattcaaa cggcattctc gattgctttg ctatcgaagg aaagccggat      480
gcggtcgaaa ctatagcaaa tgcttacgtg aagctcggtc gccatcgaga aggtgtcgtg      540
ggctttgctc agtgctacct gttcgacgcg caggacatcg tgacgttcgg cgtcacctat      600
cttgagaagc atttcg                                     616
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<210> 834

<211> 707

<212> DNA

<213> *Escherichia coli*

<400> 834

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aagtttcatt gccagacggg acttctgcaa tcgtcaaggg attgaaacct atagaagaca      60
ttgctgatga actgcgcggg gccgactatc tggtatggcg caatgggagg ggagcagtcc      120
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ggttgctcgg tcgtgagaac aatctgatgt tgctcgaata tgccggggag cgaatgctct 180
 ctcacatcgt tgccgagcac ggcgactacc aggcgaccga aattgcagcg gaactaatgg 240
 cgaactgtat gcccgcatct gaggaccct gccttctgcc cttctccga tccgggatcg 300
 ctttgagct ttgtttcagc gggcgcgca atgatcaaaa cgcaggttgt caaactgact 360
 acgtccacgc ggcgattata gccgatcaaa tgatgagcaa tgcctcgaa ctgctgggc 420
 tacatggcga tctgcatcat gaaaacatca tgttctccag tcgctggctgg ctggtgaaag 480
 atcccgtcgg tctggtcggg gaagtgggct ttggcgccgc aaatatgttc tacgatccgg 540
 ctgacagaga cgaccttctg ctcgatccta gacgcattgc acagatggcg gacgcattct 600
 ctgctgcgct ggacgtcgat ccgctcgcc tgctcgaaca ggcgtacgct tatgggtgcc 660
 tttccgcagc ttggaacgcg gatggagaag aggagcaacg cagtcta 707

<210> 835
 <211> 545
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 835
 gccgaagtat cgactcaact atcagaggta gttggcgtca tcgagcgcca tctcgaaccg 60
 acgttgctgg ccgtacattt gtacggctcc gcagtggatg gcggcctgaa gccacacagt 120
 gatattgatt tgctggttac ggtgaccgta aggcttgatg aaacaacgcg gcgagctttg 180
 atcaacgacc ttttgaaac ttcggcttcc cctggagaga gcgagattct ccgctgtgta 240
 gaagtcacca ttgttggtga cgacgacatc attccgtggc gttatccagc taagcgcgaa 300
 ctgcaatttg gagaatggca gcgcaatgac attcttgagc gtatcttcga gccagccacg 360
 atcgacattg atctggctat cttgctgaca aaagcaagag aacatagcgt tgccttggtg 420
 ggtccagcgg cggaggaaact ctttgatccg gttcctgaac aggatctatt tgaggcgcta 480
 aatgaaacct taacgctatg gaactcgccg cccgactggg ctggcgatga gcgaaatgta 540
 gtgct 545

<210> 836
 <211> 515
 <212> DNA
 <213> *Escherichia coli*

<400> 836
 gcaggtcaca ttgatacaca aaattctagc tgccggcagat gagcgaaatc tgccgctctg 60

gatcgggtggg ggctgggcca tcgatgcaag gctagggcgt gtaacacgca agcacgatga 120
tattgatctg acgtttcccg gcgagaggcg cggcgagctc gaggcaatag ttgaaatgct 180
cggcgggcgc gtcattggag agttggacta tggattctta gcggagatcg gggatgagtt 240
acttgactgc gaacctgctt ggtgggcaga cgaagcgtat gaaatcgcg aggctccgca 300
gggctcgtgc ccagaggcgg ctgagggcgt catcgccggg cggccagtcc gttgtaacag 360
ctgggaggcg atcatctggg attactttta ctatgccgat gaagtaccac cagtggactg 420
gcctacaaag cacatagagt cctacaggct cgcattgcacc tcactcgggg cggaaaagg 480
tgaggctctg cgtgccgctt tcaggctcgc atatg 515

<210> 837
<211> 502
<212> DNA
<213> *Staphylococcus aureus*

<400> 837
gctattggtg tttatggctc tcttggctcg cagactgatg ggccctattc ggatattgag 60
atgatgtgtg tcatgtcaac agaggaagca gagttcagcc atgaatggac aaccggtgag 120
tggaaggtgg aagtgaattt tgatagcgaa gagattctac tagattatgc atctcaggtg 180
gaatcagatt ggccgcttac acatggtaaa tttttctcta ttttgccgat ttatgattca 240
ggtggatact tagagaaagt gtatcaaaact gctaaatcgg tagaagccca aacgttccac 300
gatgcgattt gtgcccttat cgtagaagag ctgtttgaat atgcaggcaa atggcgtaat 360
attcgtgtgc aaggaccgac aacatttcta ccatccttga ctgtacaggt agcaatggca 420
ggtgccatgt tgattggtct gcatcatcgc atctgttata cgacgagcgc ttcggtctta 480
actgaagcag ttaagcaatc ag 502

<210> 838
<211> 452
<212> DNA
<213> *Pseudomonas aeruginosa*

<400> 838
gctaaatcga tctcatatcg tcgagtgggt gggcggagaa gaagcacgcc cgacacttgc 60
tgacgtacag gaacagtact tgccaagcgt tttagcgsaa gagtccgtca ctccatacat 120
tgcaatgctg aatggagagc cgattgggta tgcccagtcg tacgttgctc ttggaagcgg 180
ggacggatgg tgggaagaag aaaccgatcc aggagtacgc ggaatagacc agtcactggc 240

gaatgcatca caactgggca aaggcttggg aaccaagctg gttcgagcac tggttgagtt 300
 gctgttcaat gatcccgagg tcaccaagat ccaaacggac ccgtcgccga gcaacttgcg 360
 agcgatccga tgctacgaga aagcggggtt tgagaggcaa ggtaccgtaa ccaccccaga 420
 tggtcagcc gtgtacatgg ttcaaacacg cc 452

<210> 839
 <211> 565
 <212> DNA
 <213> Escherichia coli

<400> 839
 ctcatttggc tcaaaggctg aggtgtggct tgccccgagg tgatcaactg gcaggaggaa 60
 caggaggggtg catgcttggg gataacggca attccgggag taccggcggc tgatctgtct 120
 ggagcggatt tgctcaaagc gtggccgtca atggggcagc aacttggcgc tgttcacagc 180
 ctatcggttg atcaatgtcc gtttgagcgc aggctgtcgc gaatgttcgg acgcgccggt 240
 gatgtggtgt cccgcaatgc cgtcaatccc gacttcttac cggacgagga caagagtacg 300
 ccgcagctcg atcttttggc tcgtgtcga cgagagctac cggtgccgct cgaccaagag 360
 cgcaccgata tggttgtttg ccatggtgat ccctgcatgc cgaacttcat ggtggaccct 420
 aaaactcttc aatgcacggg tctgatcgac cttgggcggc tcggaacagc agatcgctat 480
 gccgatttgg cactcatgat tgctaacgcc gaagagaact gggcagcggc agatgaagca 540
 gagcgcgcct tcgctgtcct attca 565

<210> 840
 <211> 707
 <212> DNA
 <213> Staphylococcus aureus

<400> 840
 gagaatatca ccggaattga aaaaactgat cgaaaaatac cgctgcgtaa aagatacggg 60
 aggaatgtct cctgctaagg tatataagct ggtgggagaa aatgaaaacc tatatttaa 120
 aatgacggac agccggtata aagggaccac ctatgatgtg gaacgggaaa aggacatgat 180
 gctatggctg gaaggaaagc tgccgttcc aaaggtcctg cactttgaac ggcatgatgg 240
 ctggagcaat ctgctcatga gtgaggccga tggcgtcctt tgctcggag agtatgaaga 300
 tgaacaaagc cctgaaaaga ttatcgagct gtatgcccagc tgcatcaggc tctttcactc 360
 catcgacata tcggattgtc cctatacga tagcttagac agccgcttag ccgaattgga 420

ttacttactg aataacgatc tggccgatgt ggattgcgaa aactgggaag aagacactcc 480
 atttaaagat ccgcgcgagc tgtatgattt tttaaagacg gaaaagcccg aagagggaact 540
 tgtcttttcc cacggcgacc tgggagacag caacatcttt gtgaaagatg gcaaagtaag 600
 tggctttatt gatcttggga gaagcggcag ggcggacaag tggatgaca ttgccttctg 660
 cgtccggtcg atcagggagg atatcgggga agaacagtat gtcgagc 707

<210> 841
 <211> 329
 <212> DNA
 <213> *Pseudomonas aeruginosa*

<400> 841
 cctgaccaag tccaatccat gcgggctgct cttgatcttt tcggctgtga gttcggagac 60
 gtagccacct actcccaaca tcagccggac tccgattacc tcgggaactt gtcctcgtagt 120
 aggacattca tcgcgcttgc tgccttcgag caagaagcgg ttgttggcgc tctcgcggct 180
 tacgttctgc ccaagtttga gcaggcgcgt agtgagatct atatctatga tctcgcagtc 240
 tccggcgagc accgccggca gggcattgcc accgcgctca tcaatctcct caagcatgag 300
 gccaacgcgc ttggtgctta cgtgatcta 329

<210> 842
 <211> 423
 <212> DNA
 <213> *Pseudomonas aeruginosa*

<400> 842
 tgcgatgctc tatgagtggc taaatcgatc tcatalcgtc gagtgggtggg gcggagaaga 60
 agcacgcccg acacttctg acgtacagga acagtacttg ccaagcgttt tagcgcaaga 120
 gtccgtcact ccatacattg caatgctgaa tggagagccg attgggtatg cccagtcgta 180
 cgttctctt ggaagcgggg acggatggtg ggaagaagaa accgatccag gactacgcgg 240
 aatagaccag tcaactggcga atgcatcaca actgggcaaa ggcttgggaa ccaagctggt 300
 tcgagcactg gttgagttgc tgttcaatga tcccagggtc accaagatcc aaacggaccc 360
 gtcgccgagc aacttgcgag cgatccgatg ctacgagaaa gcggggtttg agaggcaagg 420
 tac 423

<210> 843
 <211> 613

<212> DNA
 <213> Staphylococcus aureus

<400> 843
 agatttgcca gaacatgaat tacacgaggg caaaaaagaa gattgttatt taatggaata 60
 tagatatgat gataatgcca caaatgttaa ggcaatgaaa tatttaattg agcattactt 120
 tgataatttc aaagtagata gtattgaaat aatcggtagt ggttatgata gtgtggcata 180
 tttagttaat aatgaatata tttttaaac aaaatttagt actaataaga aaaaaggta 240
 tgcaaaagaa aaagcaatat ataattttt aaatacaaat ttagaaacta atgtaaaaat 300
 tcctaattt gaattatcgt atattagtga tgaattatct atactagggt ataaagaaat 360
 taaaggaact ttttaacac cagaaattta ttctactatg tcagaagaag acaaaaattt 420
 gttaaaacga gatattgcca gtttttaag acaaatgcac ggttagatt atacagatat 480
 tagtgaatgt actattgata ataaacaaaa tgtattagaa gagtatatat tgttgcgtga 540
 aactatttat aatgatttaa ctgatataga aaaagattat atagaaagtt ttatggaaag 600
 actaaatgca aca 613

<210> 844
 <211> 424
 <212> DNA
 <213> Staphylococcus aureus

<400> 844
 atatcaggaa agattggaaa tacggattct gttagaccac ttgaagttac ggttataaat 60
 aggagtgaag ttgtcccttg gcaatatcct ccaaaaagag aatttatata cggtagtg 120
 ctcaggggtg aatttgagaa tggacaaatt caggaaccaa gctatgatcc tgatttggct 180
 attgttttag cacaagcaag aaagaatagt atttctctat ttggtcctga ttcttcaagt 240
 atacttgtct ccgtaccttt gacagatatt cgaagagcaa ttaaggattc tttgccagaa 300
 ctaattgagg ggataaaagg tgatgagcgt aatgtaattt taaccctagc tcgaatgtgg 360
 caaacagtga ctactggtga aattacctcg aaagatgtcg ctgcagaatg ggctatacct 420
 cttt 424

<210> 845
 <211> 532
 <212> DNA
 <213> synthetic construct

<400> 845

aagatacggg aggaatgtct cctgctaagg tatataagct ggtgggagaa aatgaaaacc 60
tatatttaaa aatgacggac agccggtata aaggaccac ctatgatgtg gaacgggaaa 120
aggacatgat gctatggctg gaaggaaagc tgctgttcc aaaggtcctg cactttgaac 180
ggcatgatgg ctggagcaat ctgctcatga gtgaggccga tggcgtcctt tgctcggaaag 240
agtatgaaga tgaacaaagc cctgaaaaga ttatcgagct gtatgaggag tgcacaggc 300
tctttcactc catcgacata tcggattgtc cctatacga tagcttagac agccgcttag 360
ccgaattgga ttacttactg aataacgac tggccgatgt ggattgcgaa aactgggaag 420
aagacactcc atttaaagat ccgcgcgagc tgtatgattt tttaaagacg gaaaagcccg 480
aagaggaact tgtcttttcc cacggcgacc tgggagacag caacatcttt gt 532

<210> 846
<211> 200
<212> DNA
<213> *Staphylococcus aureus*

<400> 846
acacagtcaa aactttatta cttcaaaaaca taatatagat aaaataatga caaatataag 60
attaaatgaa catgataata tctttgaaat cggctcagga aaagggcatt ttacccttga 120
attagtacag aggtgtaatt tcgtaactgc cattgaaata gaccataaat tatgcaaac 180
tacagaaaat aaacttgttg 200

<210> 847
<211> 510
<212> DNA
<213> *Enterococcus faecium*

<400> 847
cgtttaccaa aggagaaggt gaccaatact ctgatataga gttctatata tttttgaaac 60
atagtataac ctggaacttt gattcatcca actggttggt tgacgtagct ccgtacttga 120
tgctttataa aatgagtac ggaacagagg tagttatfff tgataatcct atacgtgggg 180
aatttcattt cttttctgaa aaagatatga acataatccc ctggtttaaa gattcagggt 240
atattcctga tacgaaggct atgcttattt acgatgaaac agggcaatta gaaaattatt 300
tatcagagat aagtggtgca agaccaaata gacttactga agaaaatgct aattttttgt 360
tgtgtaattt ctctaactta tgggtgatgg gaatcaacgt tctaaaaaga ggagaatatg 420
ctcgttcatt agaactctta tcacaacttc aaaaaaatac actacaactt atacgtatgg 480

cagaaaaaaaa tgctgataat tggctaaaca 510

<210> 848
 <211> 227
 <212> DNA
 <213> Staphylococcus aureus

<400> 848
 gtgattacag aatgaaagc agggcacctg aaagatatcg ataaaccag cgaaccattt 60
 gaggtgatag gtaagattat accgaggtat gaaaacgaga attggacctt tacagaatta 120
 ctctatgaag cgccatattt aaaaagctac caagacgaag aggatgaaga ggatgaggag 180
 gcagattgcc ttgaatatat tgacaatact gataaggtaa tatatct 227

<210> 849
 <211> 708
 <212> DNA
 <213> Staphylococcus aureus

<400> 849
 gacagatttt cgatccctta atattgaaaa tctttatgct tatcaatttg aaaaaatagc 60
 acttattgga ggtaatggta ctggcaaac cacattactg aatatgattg ctcaaaaaac 120
 aaaaccagaa tctggaacgg ttgaaacgga tggcgaaatt caatattttg aacagcttaa 180
 catggatgtg gaaaatgatt ttaacacggt agacggtagt ttaatgagtg aactccatat 240
 acctatgcat acaaccgaca gtatgagtgg tggtgaaaa gcaaaatata aattagctaa 300
 tgtcatatca aattatagtc cgatattact tttagatgaa cctacaaatc acttgataa 360
 aattggtaaa gattatctga ataataatattt aaaatattac tatggtactt taattatagt 420
 aagtcatgat agagcactta tagaccaa attgctgacaca atttgggata tacaagaaga 480
 tggcacaata agagtgttta aaggttaatta cacacagtat caaaatcaat atgaacaaga 540
 acagttagaa caacaacgtc aatatgaaca gtatataagt gaaaaacaaa gattgtccca 600
 agccagtaaa gctaaacgaa atcaagcgca acaaatggca caagcatcat caaaacaaaa 660
 aaataaaagt atagcaccag atcgtttaag tgcatcaaaa caaaaagg 708

<210> 850
 <211> 259
 <212> DNA
 <213> Staphylococcus aureus

<400> 850
 gatataggat acaaaataga agttgattgg atgccttcac gtatggaact taaacataaa 60

gaatatggat atttagatat tcatcccata aatctaaatg atgatggttc aattactcaa 120
 gcaaaccocg aaggtggcaa ttacgttttt caaaatgaat ggttctcaga aactaattat 180
 aaagccgaa aaataccatg tatttcaaaa gaagctcaac ttctttttca ttctgggtat 240
 gacttaacag aaaaagacc 259

<210> 851
 <211> 544
 <212> DNA
 <213> Staphylococcus aureus

<400> 851
 catttaacga cgaaactggc taaaataagt aaacaggtaa cgtctattga attagacagt 60
 catctattca acttatcgtc agaaaaatta aaactgaaca ttcgtgtcac ttaattcac 120
 caagatattc tacagtttca attccctaac aaacagaggt ataaaattgt tgggaatatt 180
 ccttaccatt taagcacaca aattattaaa aaagtggttt ttgaaagcca tgcgtctgac 240
 atctatctga ttgttgaaga aggattctac aagcgtacct tggatattca ccgaacacta 300
 gggttgctct tgcacactca agtctcgatt cagcaattgc ttaagctgcc agcggaatgc 360
 tttcatccta aaccaaagt aaacagtgtc ttaataaaac ttaccogcca taccacagat 420
 gttccagata aatattggaa gctatatacg tactttgttt caaaatgggt caatcgagaa 480
 tatcgtcaac tgtttactaa aaatcagttt catcaagcaa tgaaacacgc caaagtaaac 540
 aatt 544

<210> 852
 <211> 614
 <212> DNA
 <213> Staphylococcus aureus

<400> 852
 ccagaaaaac cctaaagaca cgcaaaattt tattacttct aaaaagcatg taaaagaaat 60
 attgaatcac acgaatatca gtaacaaga caacgtaata gaaatcggat caggaaaagg 120
 acattttacc aaagagctag tcaaaatgag tcgatcagtt actgctatag aaattgatgg 180
 aggcttatgt caagtgacta aagaagcggg aaaccctct gagaatataa aagtgattca 240
 aacggatatt ctaaaatfff ccttccaaa acatataaac tataagatat atggtaatat 300
 tccttataac atcagtacgg atattgtcaa aagaattacc tttgaaagtc aggctaaata 360
 tagctatctt atcgttgaga agggatttgc gaaaagattg caaaatctgc aacgagcttt 420

gggtttacta ttaatggtgg agatggatat aaaaatgctc aaaaaagtac caccactata 480
 ttttcatcct aagccaagtg tagactctgt attgattggt cttgaacgac atcaaccatt 540
 gatttcaaag aaggactaca aaaagtatcg atcttttgtt tataagtggg taaaccgtga 600
 atatcgtggt cttt 614

<210> 853
 <211> 525
 <212> DNA
 <213> Enterococcus faecium

<400> 853
 gtccgaatcc tatgaaaatg taccctatag aaggaaacaa atcagtacaa tttatcaaac 60
 ctattttaga aaaattagaa aatggtgagg ttggagaata ctcatattat gattctaaga 120
 atggagaaac ttttgataag caaattttat atcattatcc aatcttaaac gataagttaa 180
 aaataggtaa attttgctca ataggaccag gtgtaactat tattatgaat ggagcaaadc 240
 atagaatgga tggctcaaca tatccattta atttatttgg taatggatgg gagaaacata 300
 tgccaaaatt agatcaacta cctattaagg gggatacaat aataggtaat gatgtatgga 360
 taggaaaaga tgttgtaatt atgccaggag taaaaatcgg ggatgggtgca atagtagctg 420
 ctaattctgt tgttgtaaaa gatatagcgc catacatggt agctggagga aatcctgcta 480
 acgaaataaa acaaagattt gatcaagata caataaatca gctgc 525

<210> 854
 <211> 467
 <212> DNA
 <213> Staphylococcus aureus

<400> 854
 cattagcagg aggatgtttc tggatgatgg ttaaacatt tacatcatat ccaggcatca 60
 agtcagtcgt atctggttat agtggcggtc atgttgacaa cccaacttat gaacaggtat 120
 gtacgaatca aaccggccat gtcgaagcag tacaattac gtttgatcca gaggttactt 180
 cttttgaaaa tatattagac atatatttca aaacatttga cccaactgat gatcaagggc 240
 aatttttcga tagaggcgaa agctatcaac cagtcatttt ctatcatgat gaacatcaga 300
 aaaaggctgc tgagttaaaa aagcaacaat taaatgaaca aggtattttc aagaaaccag 360
 tgattacacc tattaacca tataaaatt tctatccagc tgaagactac catcaagatt 420
 attacaaaa gaaccgggta cattattacc aatatcaacg tggttca 467

<210> 855
 <211> 451
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 855
 gcatataaat atcaaaacca tacaagaaat aaaaaatgac tttcaaagaa gaatgaataa 60
 agttaaagaa acttatggtg tatcagatga attatggaac agatggaaac aatggttaga 120
 aaacgacgaa ctatggcctc gacatgcgac catgatacat ggggacttac atccaggaca 180
 tataatggta gataaccaag caaacgtcac aggtctcata gactggactg aagcaaccca 240
 ctccgaccca tcaatggact ttatgggaca ccatcgtgta ttcgacgacg aaggattaga 300
 gcaactcata acagcatatg gtaaagctgg aggtgaaata tggccacgaa tgaaagagca 360
 tataatagaa ctcaatgcag tattcccaat gtttatcgct gagtttgcta tggaatcagg 420
 agaatcggcg tatgaaacga tggcattgaa a 451

<210> 856
 <211> 505
 <212> DNA
 <213> *Streptococcus pyogenes*

<400> 856
 ggtcttgtct atggcttcac tattaggttt ttaccctat gcggtctttg gacctgcaat 60
 tgggtgtgcta gtggatcgtc atgataggaa gaagataatg attggtgctg atttaattat 120
 cgcagcagct ggttcgggtc ttactattgt tgcattctat atggagctac ctgtctggat 180
 ggttatgata gtattgttta tccgtagcat tggaacagct tttcacaccc cggctctcaa 240
 tgcggttacg ccacttttag taccagaaga acagcttacg aaatgtgcag gctatagtca 300
 gtctttgcag tctataagct atattgtag tccggcggtt gcagcactct tatactccgt 360
 ttgggaacta aatgctatta ttgcatoga tgtattgggt gctgtgattg catctattac 420
 ggtagcaatt gtacgtattc ctaagctggg tgatcgcgtg caaagtttg acccaaattt 480
 cataagagaa atgcaagaag gaatg 505

<210> 857
 <211> 540
 <212> DNA
 <213> *Escherichia coli*

<400> 857

gttgagaatg ggagagactg agccggtcag cagtcccacg agcgcgcca acaacatcag 60
 caccggcacg cctggcaact gtgaaagcag aagcgagccc accgcagagc cacaaaatgc 120
 caccgccagc cagttctgcg ctgatatccg ggcgccgacc gacgcatgaa tggcaatgcc 180
 aaggagacca ccagcccca tcattgagga gaacagcccg agctctgcta cttggcgtcc 240
 tgcatctaca aacagcgcag gcatgatgac gctgccgttg gcgccaacga tgcccacgaa 300
 gatcatcact ataccaaaga gagggcgag caggggttcg ctccagagaa aagcgacgcc 360
 ggcgcgcatg gagagagtcg ccgtcgtggt catcgtccga gcggcacgcg cgggaagcac 420
 ccacgcgccc agcagacctg caaggacgga gcagaacgcc gtcagcccga gcgttggcgc 480
 agcgccaagc aggccgattg cggccccccc aagggccggg ccacctagaa tcgcgacggt 540

<210> 858
 <211> 500
 <212> DNA
 <213> Streptococcus pneumoniae

<400> 858
 actaagaaaa tcgtagctat ttgggcccag gatgaagagg gtgtgattgg gaaagacaat 60
 cgtctacctt ggcatttacc agcagaactg caacacttca aagaaacaac tctgaatcat 120
 gctatcttga tggggcgggt aacctttgat ggaatagggc gtcgcttgct tccacaacgg 180
 gagactttga ttttgacag taacctagaa gaaacgatag atggggttgc tacttttcat 240
 gatgtccagt ctgtcttggg ctggtatcag gctcaagaaa agaattctta tattcttggg 300
 ggaaagcaga ttttccaggc ttttgaacc tatcttgacg aagtgattgt gactcacatt 360
 catgctcggg tggagggaga tacctatttc cctgaagagt ttgatttgtc tctttttgag 420
 acagtttcaa gtaaatttta cgccaaagat gagaagaatc cttatgattt taccatccaa 480
 tatcgcaaga gaaaggaagt 500

<210> 859
 <211> 423
 <212> DNA
 <213> Staphylococcus aureus

<400> 859
 caattacctt ggcacttacc aatgattta aagcatatta aacaactgac cactgggaat 60
 acacttghaa tggcacggaa aacttttaat tctatagga agccattgcc aaatagacgt 120
 aacgtcgtac tcactaacca agcttcattt caccatgaag ggtagatgt tataaactct 180

cttgatgaaa ttaaagagtt atctggtcat gtttttatat ttggaggaca aacgttatac 240
 gaagcaatga ttgaccaggt agatgatatg tatatcacag taatagatgg aaagtttcaa 300
 ggagacacat tctttccacc atacacattc gaaaactggg aagtcgaatc ttcagtagaa 360
 ggtcaactag atgaaaaaaaa tactataaccg catacattct tacatttagt gcgtagaaaa 420
 ggg 423

<210> 860
 <211> 506
 <212> DNA
 <213> *Escherichia coli*

<400> 860
 tggaatgggt agcttcttcg tctttttctc cattgcgccc ggactaatga tgggcaggca 60
 aggtgtgtct cagcttggct tcagcctgct gttcgccaca gtggcaattg ccatggtggt 120
 tacggctcgt tttatggggc gtgtgatacc caagtggggc agcccaagtg tcttgcgaat 180
 gggaatggga tgctgatag ctggagcagt attgcttgcc atcaccgaaa tatgggcttc 240
 gcagtcctg ttagccttta ttgctccaat gtggctagtg ggtattggtg tcgccacagc 300
 ggtatctgtg tcgccaatg gcgctcttcg aggattcgac catgttgctg gaacggtcac 360
 ggcagtctac ttctgcttg gcggtgtact gctaggaagc atcggaacgt tgatcatttc 420
 gctgttgccg cgcaacacgg cttggccgggt tgctcgtgtac tgtttgacc ttgcaacagt 480
 cgtgctcgggt ctgtcttggtg tttccc 506

<210> 861
 <211> 530
 <212> DNA
 <213> *Enterococcus faecium*

<400> 861
 gataaccatc acaaacagaa tgatgtacct gtaaagatag cggtaaatat attgaattac 60
 ctttattaat gaattttcct gctgtaataa tgggtagaag gtaattacta ttattattga 120
 tatttaagtt aaaccagta aatgaagtcc atggaataat agaaagagaa aaagcatttt 180
 caggtatagg tgttttggga aacaatttcc ccgaaccatt atatttctct acatcagaaa 240
 ggtataaatc ataaaactct ttgaagtcac tctttacagg agtccaaata ccagagaatg 300
 ttttagatac accatcaaaa attgtataaa gtggctctaa cttatcccaa taacctaac 360
 ctccgctcgt attgtaacca gttctaaaag ctgtatttga gtttatcacc cttgtcacta 420

agaaaataaa tgcagggtaa aatttatatc cttcttgttt tatgtttcgg tataaaacac 480
 taatatcaat ttctgtgggt atactaaaag tcgtttgttg gttcaaataa 530

<210> 862
 <211> 535
 <212> DNA
 <213> Staphylococcus aureus

<400> 862
 agaaaattgg gatagaaaag aatattttga aactatttt aaccagcaa ctacgtatag 60
 cactactaaa gaaattgata ttactttggt taaagatatg agtaaaaaga aaggatatga 120
 aatttatcct tctttgattt atgcaattat ggaagtgtga aataaaaata aagtgtttag 180
 aacaggaatt aatagtgaga ataaattagg ttattgggat aagttaaata ctttgatac 240
 agtttttaat aagcaaactg aaaaatttac taacatttg actgaatctg ataacaactt 300
 cacttctttt tataataatt ataaaaatga cttgcttgaa tataaagata aagaagaaat 360
 gtttcctaaa aaaccgatac ctgaaaacac cctaccgatt tcaatgattc cttggattga 420
 ttttagttca tttaatttaa acattggtaa caatagcaac tttttattgc ctattattac 480
 gataggtaaa ttttatagtg agaataataa aatttatata ccagttgcct tgcag 535

<210> 863
 <211> 632
 <212> DNA
 <213> Proteus mirabilis

<400> 863
 ttagcactct atgcgacgat gcaggatgac ttcgcaccta ttttaggaaa attatcagat 60
 aaatatggca gaaaacctat tttattaatt tcgctattgg gtgccgcatt agattaccta 120
 ttaatggcct gccccacctc attatggatg ctctacattg gacgaataat tgcgggtata 180
 acaggagcca ctggtgcagt atgcgcatca gcaatgactg atgtaactca tcctcatgaa 240
 agaacacgct atttcggttt tttgggtggt gcatttggtg tgggtttaat tattggcccc 300
 atgttagggg gattactcgg tgagatcagc gcccatacgc catttatcct tgcggctatt 360
 tctcattcgt tattatttat attttcatta ctttgtttcc aagaaactca aaccacaaaa 420
 atttcgactg aaatatccgc attaaatcag gatcacagcg ctcactctac cactggtttt 480
 attaaaaaga gtctcttttt ttggcttatt gcctatttta ttattcaact aatagggcaa 540
 attccggcca ctatttgggt gctattcaca caagttcgtt tcgcttgga cactactgaa 600

gtaggtttat ctcttgcaatt tcttggtgta tt 632

<210> 864
 <211> 656
 <212> DNA
 <213> Enterococcus faecalis

<400> 864
 cacctgcgag tacaaaactgg gtgaacacag cttttatggt aaccttttcc attggaacag 60
 ctgtatatgg aaagctatct gatcaattag gcatcaaaag gttactccta tttggaatta 120
 taataaattg tttcgggtcg gtaattgggt ttggtggcca ttctttcttt tccttactta 180
 ttatggctcg ttttattcaa ggggctggtg cagctgcatt tccagactc gtaatggtg 240
 tagttgcgag ctatattcca aaggaaaata ggggtaaagc atttggcttt attggatcga 300
 tagtagccat gggagaagga gtcggtccag cgattggtgg aatgatagcc cattatattc 360
 attggtccta tcttctactc attcctatga taacaattat cactgttccg tttcttatga 420
 aattattaaa gaaagaagta aggataaaag gtcattttga tatcaaagga attatactaa 480
 tgtctgtagg cattgtatct tttatggtgt ttacaacatc atatagcatt tcttttctta 540
 tcgttagcgt gctgtcattc ctgatatttg taaaacatat caggaaagta acagatcctt 600
 ttgttgatcc cggattaggg aaaaatatac cttttatgat tggagtcttt tgtggg 656

<210> 865
 <211> 554
 <212> DNA
 <213> Enterococcus faecalis

<400> 865
 gacaaaaggta caacgaggac ggataatacg cttttagaac gtcagagagg aattacaatt 60
 cagacaggaa taacctcttt tcagtgggaa aatacgaagg tgaacatcat agacacgcca 120
 ggacatatgg atttcttagc agaagtatat cgttcattat cagttttaga tggggcaatt 180
 ctactgattt ctgcaaaaga tggcgtacaa gcacgaactc gtatattatt tcatgcactt 240
 agggaaatgg ggattcccac aatctttttt atcaataaga ttgacaaaaa tgggaattgat 300
 ttatcaacgg tttatcagga tattaagag aaactttctg ccgaaattgt aatcaaacag 360
 aaggtagaac tgtatcctaa tgtgtgtgtg acgaacttta ccgaatctga acaatgggat 420
 acgtaaatag agggaaacga tgaccttta gagaaatata tgtccggtaa atcattagaa 480
 gcattggaac tcgaacaaga gaaagcata agatttcaga attgttctct gttccctctt 540

tatcatggaa gtgc 554

<210> 866
 <211> 404
 <212> DNA
 <213> Enterococcus faecium

<400> 866
 tccttatggca gtacgcaacg taaaatcgat tgtgcgctct gtggaaaaac atgatttcag 60
 gttggacagc gaccgtggca aggtactcag cgacatgaca gttggtgtgg tgggaacggg 120
 ccagataggc aaagcgggta ttgagcggct gcgaggattt ggatgtaaag tgttggctta 180
 tagtcgcagc cgaagtatag aggtaaacta tgtaccgttt gatgagttgc tgcaaaatag 240
 cgatatcggt acgcttcatg tgccgctcaa tacggatagc cactatatta tcagccacga 300
 acaaatacag agaatgaagc aaggagcatt tcctatcaat actgggcgcg gtccacttgt 360
 agatacctat gagttgggta aagcattaga aaacgggaaa ctgg 404

<210> 867
 <211> 250
 <212> DNA
 <213> Enterococcus faecium

<400> 867
 gtgcggtatt gggaaacagt gccgcgtag ttggtggcga ggtggaccaa atcaggctgc 60
 agtacggaat ctttcgtatt catcaggaag tcgagccgga aaaaggctct gaaaacgcag 120
 ttataaccgt tcccgcagac ctttcagcag aggagcggag acggatacag gaaacggcaa 180
 aaaaaatata taaagcgtc ggctgtagag gtctagcccg tgtggatatg tttttacaag 240
 ataacggccg 250

<210> 868
 <211> 663
 <212> DNA
 <213> Enterococcus faecium

<400> 868
 aagtgtgggc attactgttt ttggatgcga acaggatgag gcaaatgctt tccgcgcttt 60
 atcgcgggat tttcatatta tccctacgct gattagcgat gcgatatcgg cagacaacgc 120
 aaaattggcc gctggcaatc aatgcgtag cgtaggccat aagtccgagg tttccgaggc 180
 gacaattctt gcgctgagaa aggtcggggt aaaatacatt tctacccgca gcacggctg 240
 cgatcacatt gatacgactg ccgccgagag aatgggaatc tcggttgcca cggttgcgta 300

ttcgccggac agcgttgccg attatgcttt gatgctgatg ctgatggcca tacgggggtgc 360
 aaaaccacc atgcacgccg tggcgcaaca agatttcaga ttggatcgta tccgggggaa 420
 agaactgggg gatatgactg tgggagttat tggaaccggc catatcgggc aagcggtcgt 480
 caaaaggctg cggggatttg gatgccatgt gctggcctat gataacagcc gaaaaatgga 540
 tgcagattat gtccagcttg atgagcttct aaaaaacagc gatattgtta cgctccatgt 600
 gccgctttgt gcgataccc gccatctgat cggtcagaag caaattggag agatgaagca 660
 agg 663

<210> 869
 <211> 572
 <212> DNA
 <213> *Enterococcus faecium*

<400> 869
 acgagaatta tacggttttc aaatactata ccgccaaga agcattggaa tgtatagaca 60
 agtctgagat tgaccttgcc atattggaca tcatgcttcc cggcacaagc ggccttacta 120
 tctgtcaaaa aataaggac aagcacacct atccgattat catgctgacc gggaaagata 180
 cagaggtaga taaaattaca gggtaacaa tcggcgcgga tgattatata acgaagccct 240
 ttcgccact ggagtaatt gctcgggtaa aggcccagtt gcgccgatac aaaaaattca 300
 gtggagtaaa ggagcagaac gaaaatgtta tcgtccactc cggccttgtc attaatgtta 360
 acacccatga gtgttatctg aacgagaagc agttatccct tactcccacc gagttttcaa 420
 tactgcgaat cctctgtgaa aacaagggga atgtggttag ctccgagctg ctatttcatg 480
 agatatgggg cgacgaatat ttcagcaaga gcaacaacac catcaccgtg catatccggc 540
 atttgcgca aaaaatgaac gacaccattg at 572

<210> 870
 <211> 280
 <212> DNA
 <213> *Enterococcus faecium*

<400> 870
 gaattctact tgtcaggat gatgatcata tctgtaatac agtaagggcg tttctggctg 60
 aggcaggata tcaggtggat gcctgcacag atggaaatga ggcatacacc aagttttacg 120
 aaaacactta tcaactgggtt attcttgata ttatgctgcc cggatgaac gggcatgaac 180
 ttttgcgtga atttcgtgcy aaaaatgata ctcccattct gatgatgaca gccctgtcgg 240

atgacgaaaa ccaaatccgg gcgtttgatg cagaggcaga 280

<210> 871
 <211> 564
 <212> DNA
 <213> Enterococcus faecium

<400> 871
 aatgatccga gggaaacttg gggattggat cttaagtatt ttggaaaaca aatatgactt 60
 aaatcacctg gacgcgatga aattatatca atattccata cggaacaata tagatatctt 120
 tatttatgtg gcgattgtca ttagtattct tattctatgt cgcgtcatgc tttcaaaatt 180
 cgcaaaatac tttgacgaga taaataccgg cattgatgta cttattcaga acgaagataa 240
 acaaattgag ctttctgctg aaatggatgt tatggaacaa aagctcaaca cattaanaacg 300
 gactctggaa aagcgagagc aggatgcaaa gctggccgaa caaagaaaaa atgacgttgt 360
 tatgtacttg gcgcacgata ttaaaacgcc cttacatcc attatcgggtt atttgagcct 420
 gcttgacgag gctccagaca tgccggtaga tcaaaaggca aagtatgtgc atatcacggt 480
 ggacaaagcg tatcgactcg aacagctaata cgacgagttt tttgagatta cacggtataa 540
 cctacaaacg ataacgctaa caaa 564

<210> 872
 <211> 595
 <212> DNA
 <213> Enterococcus faecium

<400> 872
 acatgagttg gaggaacac agcgatattt ctttgccgca gcttctcatg agctaaaaac 60
 gcccatcgcg gctacaagcg ttctgttggg gggaaatgctt gaaaatatcg gtgactacaa 120
 agatcattct aagtatctgc gcgaatgcat caaaatgatg gataggcagg gcaaaatcat 180
 ttccgaaata ctggagcttg tcagcctgaa tgatgggaga atcgtacca tagctgaacc 240
 gttggacata gggcgcacgg ttgccgagtt gctgcccgat tttcaaacct tggcagaggc 300
 aaacaaccag cggttcgtca cagatattcc agccgggcaa attgtcctgt ccgatccgag 360
 gctgctocaa aaggcactat ccaatgtcat attgaatgca gttcagaaca cgccgaggg 420
 aggcgaggta cggatatgga gtgagcctgg tgctgaaaaa tgccgccttt ttgttttgaa 480
 catgggcggt cacattgatg atactgcgct tccaaggctg ttcacccat tctatcgcat 540
 tgatcaggcg cgaagcagaa aaagtgggag aagcggttta ggacttgcca tcgta 595

<210> 873
 <211> 598
 <212> DNA
 <213> *Enterococcus faecium*

<400> 873
 ggcagcaaag accttaaacg gcttattgat aagaccgggg gaaacctttt ctttctggtg 60
 gctggtacgc catgcggaaca aagatacccc ctataaagac ggccttacgg tgaccaatgg 120
 taaactcacc accatgtcgg gcggcggtat gtgccagatg agcaatttac tattttggat 180
 gttcctgcat acgccattga caattatcca gcgcagaggt cacgaagtaa aggagtttcc 240
 agagccaaac agtgacgaga ttaaaggggt ggatgcaacc atttcagagg gctggattga 300
 tttaaaagtg cgaaacgata ccgactgcac ctaccaaata tgggtgacct tagatgatga 360
 gaaaatcadc ggtcaggtgt ccgccgacaa agagcccaaa gcattataca aaattacaaa 420
 tggcagtatc cagtatgtcc gtgaaagtgg cgggatttat gaatatgccc aggttaaaccg 480
 gatgcaagtt gccttaggta ccggggaaat aatagattgc aagctgcttt atacaaacaa 540
 atgcaaaaac tgttatcccc tcccggaaag tgtggatatt caggaggaga accaatga 598

<210> 874
 <211> 673
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 874
 gaagatggaa caattcaagg attcatggaa accattaata tgccttatgt aggcgcggggt 60
 gtcttagcta gcgttaacgc aatggacaaa atcatgacga aatatctttt acaaactggt 120
 ggcattccac aagtaccatt cgtgccagtt ttaagaagtg actggaaagg aaatccaaaa 180
 gaagtctttg aaaaatgtga aggttcttta atttatccgg tctttgttaa acctgccaat 240
 atgggttcta gtgtcggaat tagcaaagtg gaaaatcgtg aagaattgca agaagcattg 300
 gaagaagctt tccgttatga tgcccagca attggtgaac aagggatcga agcacgtgaa 360
 attgaagtag ccattttagg aatgaagat gtccgtacga ctttacctgg tgaagtgggtg 420
 aaagatgtcg ctttctatga ttatgatgca aaatacatca ataacacgat tgaaatgcaa 480
 atcccagcgc atgttccaga agaagtagct catcaagcgc aagaatcgc taaaaaagcg 540
 tatattatgt tagatggaag tggcttaagt cgctgtgatt tcttcttaac aagcaaaaac 600
 gaattattcc tgaatgaatt gaacaccatg cctggtttta ctgactttag tatgtatcct 660

ttactgtggg aaa 673

<210> 875
 <211> 360
 <212> DNA
 <213> Staphylococcus aureus

<400> 875
 tacagtctat ccgggcattg ccagtcgggg atattaataa gagtataggt ttttattgcg 60
 ataaactagg tttcactttg gttcaccatg aagatggatt cgcagttcta atgtgtaatg 120
 aggttcggat tcatctatgg gaggcaagtg atgaaggctg gcgctctcgt agtaatgatt 180
 caccggtttg tacagtgcg gagtcgttta ttgctggtac tgctagttgc cgcattgaag 240
 tagagggaaat tgatgaatta tatcaacata ttaagccttt gggcattttg caccccaata 300
 catcattaaa agatcagtgg tgggatgaac gagactttgc agtaattgat cccgacaaca 360

<210> 876
 <211> 508
 <212> DNA
 <213> Enterococcus faecium

<400> 876
 tgggataact tcacaggaaa accggtggat gggatgagg tgaatcgcac catcggcaca 60
 aaggccgtgg cgtttgctct gcgcgaggca caaatccatg cggctgcgct tggctatggc 120
 ttgcttttat gggatggata tcggccaaga actgcggtgg actgcttctt gcgttgggca 180
 gcgcaaccgg aggacaatct cacaaaagaa aaatthtacc ccaatataga gcgagccgag 240
 ttgattacaa agggttatgt ggctcaciaa tccagccata gccgtggaag cgcaattgat 300
 cttacgctct accacctgga tacaggggaa cttgthtcaa tgggaagtaa cttcgattht 360
 atggacgaac ggtcgcacat tacagcaaaa gggatagggg atgcagaggc acaaaatcga 420
 agatgcttgc gtaaaatcat ggaaagcagc ggatttcagt cttatcgctt tgaatggtgg 480
 cactataagt tgattgatga gccatacc 508

<210> 877
 <211> 551
 <212> DNA
 <213> Enterococcus faecium

<400> 877
 atacttaggt tatgactacg ttaatgaagc actgthtctt caggaaaaag tcgaatthca 60

aaattatgat caaaatccca aagaacattt agaaaatagt gggacttctg aaaataccca 120
 agagaaaaca attacagaag aacaggttta tcaaggaaat ctgctattaa tcaatagtaa 180
 atatcctggt cgccaagaaa gtgtgaagtc agatatcgtg aatttatcta aacatgacga 240
 attaataaat ggatacgggt tgcttgatag taatatttat atgtcaaaag aaatagcaca 300
 aaaattttca gagatgggtca atgatgctgt aaagggtggc gttagtcat tttattattaa 360
 tagtggctat cgagactttg atgagcaaag tgtgctttac caagaaatgg gggctgagta 420
 tgccttacca gcaggttata gtgagcataa ttcaggttta ttagtagatg taggatcaag 480
 cttgacgaaa atggaacgag cccctgaagg aaagtggata gaagaaaatg cttggaata 540
 cgggttcatt t 551

<210> 878
 <211> 552
 <212> DNA
 <213> *Enterococcus faecium*

<400> 878
 gtgcttcat tatttcgttc acagtctgca cgctgttttt ggggtggaga ctggcttccg 60
 tattggaggc aacacagata ccgcccattc ctgcaactca tacaggcagc agcactgacg 120
 tagtggagaa tttggaggaa aacgctcttg ccaccgcaa agaacaggga gatgaacagg 180
 aatggagcct gatttttagtg aacaggcaga accccatccc cgcacagtac gatgtggagc 240
 ttgagcaact atcaaagtgt gagcggatag atattcggat ttctccctat cttcaagatt 300
 tgtttgatgc cgcaagaact gatggagttt acccgattgt cgcacccgga taccgaacaa 360
 cagaaaaaca gcaagaaatt atggatgaaa aaattgccga atataaggcg aaaggctaca 420
 cctctgcaca ggctaaagcg gaagcagaaa cttgggtggc cgtgccggga acgagcgagc 480
 atcagcttgg tcttgctgtg gatatcaatg cggacggaat tcattcaaca ggcaacgagg 540
 tttatagatg gc 552

<210> 879
 <211> 542
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 879
 ttgtctggta tcccctatgt aggctgcat attcaaagct ccgacgcttg catggacaaa 60
 tcaactggct acattcttac aaaaaatgcg ggcacgccc tccccgaatt tcaaatgatt 120

gaaaaagggtg acaaaccgga ggcgaggacg cttacctacc ctgtctttgt gaagccggca 180
 cggtcagggtt cgtcctttgg cgtaaccaa gtaaacagta cggaagaact aaacgctgcg 240
 atagaagcag caggacaata tgatggaaa atcttaattg agcaagcga ttcgggctgt 300
 gaggtcggct gcgcggcat gggaaacgag gatgattga ttgtcggcga agtggatcaa 360
 atccggttga gccacggtat cttccgcatc catcaggaaa acgagccgga aaaaggctca 420
 gagaatgcga tgattatcgt tccagcagac attccggtcg aggaacgaaa tcgggtgcaa 480
 gaaacggcaa agaaagtata tcgggtgctt ggatgcagag ggcttgctcg tgttgatctt 540
 tt 542

<210> 880
 <211> 457
 <212> DNA
 <213> *Enterococcus faecium*

<400> 880
 aggattgcta gctttatatt tagtgacact aatctggta gtgttattca aattacaata 60
 caatatTTTA tcagtatTTA attatcatca aagaagtctt aacttgactc catttactgc 120
 tactgggaat ttcagagaga tgatagataa tgttataatc tttattccat ttggcttgct 180
 tttgaatgtc aattttaaag aaatcggatt tttacctaag tttgcttttg tactggtttt 240
 aagtcttact tttgaataa ttcaatttat cttcgtatt ggagcgacag acataacaga 300
 tgtaattaca aatactgttg gaggetttct tggactgaaa ttatatggtt taagcaataa 360
 gcatatgaat caaaaaaat tagacagagt tattatTTTT gtaggtatac ttttgctogt 420
 attattgctc gtttaccgta cccatttaag aataaat 457

<210> 881
 <211> 360
 <212> DNA
 <213> *Enterococcus flavescens*

<400> 881
 aagctgcctt atgtaggttg cggggtggcc ggttctgcct tatgtatgaa caaatggctg 60
 ctgcatcaag ctgcagcagc cattggcgta caaagtgctc ctacgattct cttgacaaat 120
 caagccaacc agcaagaaca aatcgaagct tttatccaga cccatggctt tccagttttc 180
 tttaagccta atgaagcggg ctctcaaaa gggatcacta aagtcacctg cgttgaagaa 240
 atcgtttctg ccttaaaaga agcctttact tattgttccg cagtgtcctt acaaaaaaat 300

attgccggtg ttgagatcgg ttgcggtatt ttgggcaacg actctttgac tgtcgggtgct 360

<210> 882
 <211> 459
 <212> DNA
 <213> Enterococcus faecium

<400> 882
 gacatacagag ttggctgaat cgcttttgaa ggcaaaagaa ctggctgcta cccaagggta 60
 cggattgctt ctatgggacg gttaccgtcc taagcgtgct gtaaactggt ttatgcaatg 120
 ggctgcacag ccgaaaata acctgacaaa ggaaagtat tatccaata ttgaccgaac 180
 tgagatgatt tcaaaaggat acgtggcttc aaaatcaagc catagccgcg gcagtgccat 240
 tgatcttacg ctttatcgat tagacacggg tgagcttga ccaatgggga gccgatttga 300
 ttttatggat gaacgctctc atcatgcggc aaatggaata tcatgcaatg aagcgcaaaa 360
 tcgcagacgt ttgcgctcca tcatggaaaa cagtgggttt gaagcatata gcctcgaatg 420
 gtggcactat gtattaagag acgaaccata cccaatag 459

<210> 883
 <211> 500
 <212> DNA
 <213> Proteus mirabilis

<400> 883
 cctttgaagc tggactgac cctgatattg cgcaagtcca agtgcaaaat aaattgcaat 60
 tggcaatgcc tctttacct caggaagtac aacaacaagg gattagtgtc gataaatctt 120
 ctagttcatt cttaatgggt gcaggtttta tctctggtga tggctcgatg tcacaagatg 180
 acatgccga ctatgtaggt gcaacaatta aagatccatt aagccgtgtc acaggggtgg 240
 gtgaaacgca gttatttggg acacaatacg caatgcgtat ttggttagat ccagataaac 300
 tggtgaaata taacatgacc acacttgatg ttattaatgc gattaaatcg caaaataacc 360
 aagtggcggc aggccaatta ggtggtacgc caccagtgcc tggtcagcgt ttaaatgtat 420
 ctatcattgc gcaaacctga cttaatacac ctgagcaatt tgctgatatt ctgatgaaag 480
 tcaatcaaga cggttcacag 500

<210> 884
 <211> 280
 <212> DNA
 <213> Pseudomonas aeruginosa

<400> 884
 tgtcgaagtt ttccattgat aggcccatth ttgcgtgggt gatcgccttg gtgatcatgc 60
 tcgcgggagg cctgtcgatc ctcaatctgc cggtaacca gtaccggcc atgccccgc 120
 cggccatcgc cgtgcagggt agtaccggc gcgcctcggc cgagacgggt caggacaccg 180
 tggccagggt gatcgcagc cagatgaacg ggatcgaca tctgcgctac atctcctcgg 240
 agagtaactc cgacggcagc atgaccatca ccgtgacctt 280

<210> 885
 <211> 477
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 885
 caatggttac aggttggtga agaactttct ctttttaaag ctggcttata cctattacct 60
 atggcaatag gagctatggt gtttgacca attgcaccg gattagcggc gcgatttga 120
 ccgaaaatag tgttacctc cggaattgga attgcagcca ttggcatggt tattatgtat 180
 ttctttggtc atccattatc atattctaca atggctttag cattaatttt agttgaagct 240
 ggtacggctt cactagcagt tgcctctgct ctaataatgt tagaacacc tacatcaaaa 300
 gcagtaatg cagctgctgt tgaagagtct atgtatgacc ttggaaatgt ttttgggtga 360
 gcagtacttg gtagcctatc ttctatgctt tatcgtgtat ttttagatat ttcatctttt 420
 tcatcaaaaag gtatagttgg agatttagct catgtagctg aagaatctgt agtgggc 477

<210> 886
 <211> 584
 <212> DNA
 <213> *Escherichia coli*

<400> 886
 ctcttagacg ccctgtccga tcagatgcac cgtgtttcaa tcgacagctt ccaaccggaa 60
 acccagcgtt atgcgtcaa gcgcggcgtg ggctacctga acgatatcca aggatttctt 120
 gaccctgcgc tctatcccga tattgctgag gcggactgca ggctgggtgt tatgcactca 180
 gcgcagcggg atggcatcgc caccgcacc ggtcaccttc gaccgaaga cgcgctcgac 240
 gagattgtgc ggttcttoga ggcgcgggtt tccgccttgc gacggagcgg ggtcgtgccc 300
 gaccggctca tctcgatcc ggggatggga tttttcttga gccccgacc gaaacatcg 360
 ctgcacgtgc tgtcgaacct tcaaaagctg aagtcggcgt tggggcttcc gctattggtc 420
 tcggtgtcgc gaaatcctt cttgggcgcc accgttggcc ttctgtaaa ggatctgggt 480

ccagcgagcc ttgcggcgga acttcaacgag atcggcaatg gcgctgacta cgtccgcacc 540
 cacgcgcctg gagatctgag aagcgcaatc accttctcgg aaac 584

<210> 887
 <211> 784
 <212> DNA
 <213> Escherichia coli

<400> 887
 catcgtcaac ataacctcgg acagtttctc cgatggaggc cggatatctgg cgccagacgc 60
 agccattgag caggcgcgta agctgatggc cgagggggca gatgtgatcg acctcgggtcc 120
 ggcatccagc aatcccagc cgcgcctgt ttcgtccgac acagaaatcg cgcgtatcgc 180
 gccggtgctg gacgcgctca aggcagatgg cattcccgtc tcgctcgaca gttatcacc 240
 cgcgacgcaa gcctatgcct tgcgcggtg tgtggcctat ctcaatgata ttcgcggttt 300
 tccagacgct gcgttctatc cgcaattggc gaaatcatct gccaaactcg tcgttatgca 360
 ttcggtgcaa gacgggcagg cagatcggcg cgaggcacc gctggcgaca tcatggatca 420
 cattgcggcg ttctttgacg cgcgcacgc ggcgctgacg ggtccgggta tcaaacgcaa 480
 ccgccttgtc cttgatcccg gcatgggggt ttttctgggg gctgctcccg aaacctcgt 540
 ctcggtgctg gcgcggttcg atgaattgag gctgcgcttc gatttgccgg tgcttctgtc 600
 tgtttcgagc aaatccttctc tgcgcgagct cacaggccgt ggtccggggg atgtcggggc 660
 cgcgacactc gctgcagagc ttgccgccgc cgcaggtgga gctgacttca tccgcacaca 720
 cgagccgagc cccttgagc acgggctggc ggtattggcg gcgctgaaag aaaccgcaag 780
 aatt 784

<210> 888
 <211> 344
 <212> DNA
 <213> Staphylococcus lugdunensis

<400> 888
 gaggtgtaat tatgattcag actattgtaa ctgctgctat ctttatattg cgcaagcatt 60
 agacttatta gtgattttat taatgttctt tgctagagca aagactagga aagaatatcg 120
 agatatttat attggtcaat atgtaggac tgtggcatta attgtcataa gtttattctt 180
 tgcctttgtc ttaaattatg ttctgaaaa atggatatta ggattattag ggtaataacc 240
 gatttattta ggaattaaag tggctattta tggatagat gacggagaag agagagctaa 300

aaaagaattg aatgaaaagg gattgtctaa attagttggt acga 344

<210> 889
 <211> 503
 <212> DNA
 <213> Pseudomonas aeruginosa

<400> 889
 ctgcacccga tctacgtcga cgtcaccag ccgtccaccg ccctgttgcg catgcgccgc 60
 gaactggcca gcggccagtt ggagcgcgcc ggcgacaacg ctgcgaaggt ctccctgaag 120
 ctggaggacg gtagccaata cccgctggaa ggccgcctcg aattctccga ggtttccgtc 180
 gacgaaggca ccggctcggc caccatccgc gccgtgttcc ccaaccgaa caacgagctg 240
 ctgcccggca tgttcgttca cgcgcagttg caggaaggcg tcaagcagaa ggccatcctc 300
 gctccgcagc aaggcgtgac ccgcgacctc aagggccagg ctaccgcgct ggtggtgaac 360
 gcgcagaaca aggtcgagct gcgggtgatc aaggccgacc gggatgatcg cgacaagtgg 420
 ctggtcaccg aaggcctgaa cgcggcgac aagatcatta ccgaaggcct gcagttcgtg 480
 cagccgggtg tcgagtgaa gac 503

<210> 890
 <211> 503
 <212> DNA
 <213> Proteus mirabilis

<400> 890
 tgtcatcata gctcttaaca taatcgcggc tcttcttaaa tcaaggttgg caggaagttg 60
 ttttttttcg atacagcgag ataaagattg ctctattcta gagtaatcgg ctgcacataa 120
 ttctcggcgg atttcaaca ttggtgtcat ttcaccaaca aattcgcact tatggaata 180
 tatttctaga agtgacattat gtttcggatc ttcgacaatt gatgtcaata tgtaaataag 240
 caattctctt aatacaata gtggatcatc tggatatttt gattgatact ctaattctaa 300
 tgattctatt ttaagtcgg tgagttcaca cgcttcagta aataaatcca ctttattctt 360
 aaagtgccaa tatattgcac ctcgagttac tccggcctcg gttgcaatat ctgaaagtga 420
 tgtggcagaa acaccttgca cagtaaatag cctaagtgca gcatcaataa tetgctgtct 480
 tgtctcttgt gcttggcgtt tag 503

<210> 891
 <211> 343

<212> DNA
 <213> *Enterococcus faecalis*

<400> 891
 gaccaggagt tggtagtttt attgcttatt taggaattcg cgctccattt tttgcggccg 60
 ctttttagc gtttattggt tttattttga cattaactgt tttgaaggag ccagagaaac 120
 gaatttagc cgctgttgaa gcgaaaaaag gttcatttat ggatatttta agaaatccaa 180
 tgtttacctc attatttggt attatcttaa tttcctcttt tggcctgcaa gcgttcgaat 240
 ctatttatag tattatggcg accattaatt ttggctttac cacaagtgaa atagcaatcg 300
 tgattacggt tagtgggtatt ttagcgttga tttgtcagct gtt 343

<210> 892
 <211> 544
 <212> DNA
 <213> *Proteus mirabilis*

<400> 892
 ctggctctgt tagtgctttc aggcagcttg gttggtgctg gatgtggcga caaaaatcag 60
 tctgctggag gtccacctcc tgctcctgct gtaggtgttg ttacattaga tgcgaaacca 120
 ctgactatca caacagactt acctggtcgt acatctgctt atcgtatcgc agaggttcgc 180
 cctcaggttg gcggcatcat cttaaaacgc aattacaccg aaggtagtta tgtagaagca 240
 ggaacatctt tataccaaat cgatcctgct atttttcaag ctacattaaa cagtgtctca 300
 gctgatttag caaaagcgaa agcgaatgct gaaattgctc gtctgactgt agagcgctat 360
 aaacctctac tcggcaccaa ttatgtcagt aaacaagatt ttgataccgc aacatctcag 420
 tacgctcaag ctgltgctgc agtaaaagca gctgaagcta cagtgactaa tgcaaaaatt 480
 aatcttgaat ataccaaagt caccgcacca atttctggcc gttcaggtaa atcaacggta 540
 acag 544

<210> 893
 <211> 573
 <212> DNA
 <213> *Proteus vulgaris*

<400> 893
 cctgaaatcc actactgacc ggctccagcc gctgacctta gatacctgcc agcaagctaa 60
 ccccgaactg accgcccgcg cagcgttttag catgaatgtc cgaacgtttg tgctggtgaa 120
 agataaaaaa acattctggt catctgcgac cggtagatg gacattccac tcaatgaatt 180

gattccggcg ctcgacatta ataaaaacgt cgatatggcg atcttaccog gcacgccgat 240
 ggtgccgaac aaaccgcaa tcgtcatctg gtatcgcaac ctttgctga aaaatagcgg 300
 cgtctttgcc gctctgaatc tcaacctgac gccttcactc ttttatagtt cacggcagga 360
 agattacgat ggcgtcgccc tcattattgg caatactgcy ctatctacct tttcttcacg 420
 tttgatgaac gttaacgaat taaccgacat gccagtcctg gaaactaaaa ttgcgggcat 480
 tcctctgacc gttcggcttt atgcagatga ctggacatgg aacgatgtgt ggtacgcatt 540
 tttactgggc ggcattgagt gaactgtcgt tgg 573

<210> 894
 <211> 581
 <212> DNA
 <213> Streptococcus mutans

<400> 894
 gaaatgatat tgacgggact ttcataaaaa ttttcaagga cttgaggtgt aataatatct 60
 tttttaggac cttgagccac tattttacct ctacgaagga ggaggatatg actcatttta 120
 tcagtgattt cttcagcatg gtgggtaaca taaaggatag ttggagcatg tgtaactca 180
 gtaatctttt caactgtgt tagcaatttt tcacgggcaa aaagatccag tccgctgggt 240
 gcttcatcca aaataatgat ttcaggatct tccataaggc tgcgcgcaat aaggaggagt 300
 tgtttttcac cttgtgagag gctgctatag atgcgaccaa gcaagtgttt tccgccgatg 360
 acagtaagca tttggcgtgc ttcattaagt tctgtttcgt cgtattcctt gtagagaatg 420
 cttgatttgt atttaccagt tagcacgatc ttttcagcca acatatttgc aggagatgc 480
 tcagcaataa aagagcccac gacaccgatt ttagtccgca tattgggaat atcacctga 540
 ccaaacctag tattgagaat ttcaacctgt cttgtgttg a 581

<210> 895
 <211> 281
 <212> DNA
 <213> Escherichia coli

<400> 895
 aaggctggct ttttcttgtt atcgcaatag ttggcgaagt aatcgcaaca tccgattaa 60
 aatctagcga gggctttact aagcttgccc cttccgccgt tgtcataatc ggttatggca 120
 tcgcattdta ttttctttct ctggttctga aatccatccc tgcggtgttt gcttatgcag 180
 tctggtcggg actcggcgtc gtcataatta cagccattgc ctggttgctt catgggcaaa 240

agcttgatgc gtggggcttt gtaggtatgg ggctcataat t 281

<210> 896
 <211> 609
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 896
 attagaaatt gcgactggcg caatcaactgc aggtacatta attgcaatga tattttatgt 60
 tattcagtta tctatgcctt taatcaatct ttccacgta gttacagatt ataaaaaggc 120
 agtcggtgca agtagtagaa tatacgaat catgcaagaa cctattgaac cgacagaagc 180
 tcttgaagat tctgaaaatg tattaattga tgacggtgta ttgtcatttg aacatgtaga 240
 ctttaaatat gatgtgaaga aaatattaga tgatgtgtcg ttccaaatcc cacaaggtea 300
 agtgagtgtt tttgtaggcc cttctgggtc tggtaaaagt acgatattta atctgataga 360
 acgtatgtat gaaattgagt caggtgatat taaatatggc cttgaaagtg tctatgatat 420
 cccgttatct aagtggcgac gcaaaattgg atatgttatg caatcaaatt cgatgatgag 480
 tggtaacaatt agagacaata ttttatacgg aattaatcgt catgtttcag atgaagaact 540
 tattaattat gctaaattag cgaactgtca tgattttatc atgcaatttg atgaaggata 600
 tgacacgct 609

<210> 897
 <211> 274
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 897
 ttggatagtt caacaaaaac attaacagaa gataaacagg tttaccgtgt ggagggtttc 60
 tcgtgtgcca attgtgctgg gaagtttgaa aaaaatgtaa aagaactatc aggggtgcat 120
 gatgctaaag tcaatttcgg agcttccaaa attgatgtct ttggcagtgc aaccgttgaa 180
 gatctgaaa aggctggtgc tttcgagaat cttaaagtgg caccagagaa ggctagaaga 240
 agggtcgaac cagtggtaac agaagataaa aatg 274

<210> 898
 <211> 532
 <212> DNA
 <213> *Klebsiella oxytoca*

<400> 898
 tgagcagcgt aaccagacat ggctggagtt ggtgggggaa ggcgagcagc tcatgggcca 60

acgctgcccc gcagatgagc cgcgggggat tgcgctggca acccgctgga tggagcagct 120
 ggagcaggat accgccggca ggccggagtt tctgactcgc ctgaatgaga tgcacgccgc 180
 cgaaccgcag atgctgtaac aaactggggg gatgccggag atgattgatt tcattaccgc 240
 tgcttttgcc gaaagcaagc tggccatctg ggcgcgctat ctgaacgccg aagagctggc 300
 ctttaccgcg cagcactatt tcgatcgcct gatggagtgg ccggcgctgg tggccgacct 360
 gcatcgggcc tgtcgtgaga agcgagaccc ggcctccccg gaaggtcagc agctggcgca 420
 gcgctggctg gcgctgttcc agtcttacgc gggtaaagat gcgcagacgc agcagaagtt 480
 tcgctatgcc atggagcagg agccgcattt gatgaaagga acgtggatga ct 532

<210> 899
 <211> 500
 <212> DNA
 <213> *Klebsiella pneumoniae*

<400> 899
 atgaaaaacc ctcatcaaaa actttcatca tcaccattag cagtgggtgcg cagtattgcc 60
 actcactgga gtattattct gcagatggct aaacgtgatg ttgttgaag atataaaggt 120
 tctgtgatgg gcctgctttg gtcttttttg aacctttat ttatgttaac agtatatact 180
 tttgtcttct ccgtggtatt caaagccaga tggtaactg gtggggacga aagtaggaca 240
 cagtttgcta taattttatt tgtcggaatg atagttcatg gttttttaag tgaagtggta 300
 aataaagcgc cgttgattat tttgggaaat acaactatg tgaagaaagt tatatttcca 360
 ttggaaacgc tgcctgttat ctctttatct gcggcattat ttcatacttg taccagcctt 420
 tgtgtgttac tgatggcggt tttcattttt aatggatatt tacattggac catagtgttt 480
 ttacctttgg tctttttccc 500

<210> 900
 <211> 370
 <212> DNA
 <213> *Enterococcus faecium*

<400> 900
 agaacatata cgcaaaacaag gagaaggaat ccttctctct ccgaaagtaa gctttcaagt 60
 atatcagcaa aagggttatac aaatgacatc tgaagaatcc atcattcggt ttgtcatgag 120
 acaaacagag ttttcagaat cgcttgctcg tagtttgctg aatcacttag gggttgctca 180
 ggaaactctg acgaaaccgt tatgtacatt aagtggggga gaagcgaccc gtctgacgat 240

tgctttgctt tttactaagc caagtaatgt gttgctgtta gatgaaccga ctaattttat 300
 tgatatggca acgatcgaag ctttagagaa gctaatagcaa atatatccgg gaacgatattt 360
 gtttacatca 370

<210> 901
 <211> 400
 <212> DNA
 <213> *Escherichia coli*

<400> 901
 aaccgtttat acgttggtga gttggttggc cattctggga tactggttgc tcattgcagg 60
 cgtaacttta cgcattctaa tgaaacgacg cgcagttccc tccgcgatgg cctggctggt 120
 gattatttac attctgccgt tagtcggaat tattgcctat cttgccgttg gcgagctcca 180
 tttaggcaaa cgccgcgctg agcgcgccag agcgatgtgg ccttccaccg caaaatggct 240
 taacgacctt aaagcctgta agcatatctt cgccgaagaa aatagcagtg tcgctgcgcc 300
 attattcaag ctttgcgagc gtcgtcaggg gatcgctggg gtcaaaggga atcagctaca 360
 actgatgacc gagtcagatg atgtgatgca ggcgttaatc 400

<210> 902
 <211> 540
 <212> DNA
 <213> *Klebsiella pneumoniae*

<400> 902
 atgttctcgc tgcagttctg gcctatgaga aagggatgat cctggccaac gataaaccag 60
 agcctacaaa acttgcagag aaccgctctt ctgaaacttg cagtttggaa gacctcaaaa 120
 gcattcagtt acatactgct aatgaagaaa ttggggaaaa acgttttggg actgcgcgtg 180
 ctattattaa aaatcttacc atctacaaat cagatgggtac gactttgaca gagaaaccac 240
 tcatcaaatc aggtgaagaa gttacatttg atttcaccaat attagctacc gaagagatta 300
 aggatggttc tcttggcctt tccatatcca aagctcaggg aggggatatt tggggagata 360
 gtaatattgg cgcaggttca ccaattacac ttcgtccagg tagtcagcgt atcgtttata 420
 aagcaacgct gcctataaat tcgggcgatt acctaataca ctgcgcctc gctatgggtg 480
 gcaacgggtg tcgagaggag cttgatcaac gtcgcccgat gatgaaaata aagttttggt 540

<210> 903
 <211> 770

<212> DNA

<213> *Klebsiella pneumoniae*

<400> 903

ataaagcaat gaagcctaaa gttatcgctt ctattgtatt atttaatcat tcctatgatg 60
 atattaaaga tacgttcctc tcattatgcc atgaagagag cgttgaaaaa ataatcttcg 120
 ttgataatgg tggttgtcag tgggcggcat cattgaatga acctaagggtg agctacatca 180
 agtctcctta caactgtggt tttggtgctg gacataatct tgcaataaaa gcaagtgcag 240
 actttgacgg ttatcttctt atatgtaatc cggatataag ctttgataag cagtcaactg 300
 ataaattagt ttcgtttgcg tgggaaaatg agtatagttt tttgttttcc ccgcaaataa 360
 tatatagaaa tggtgagaga caatatagtt gccgtgtact acctactccc ggtaatcttt 420
 taagacgttt ctttcagtg actgcaataa agtacgatgt taaatatgaa ctgaaagatg 480
 cagcetatga tgagatattt tccccaccaa cggtagtggt ctgtttcatg ttattaagta 540
 atgtattatt gcaaaaactt aacggttttg atgaacgata ctttatgtat ctggaagatg 600
 tagatttatg tcgccgagca ttacagctaa ccaaaatata ctattatcct ggaacaacta 660
 ttgtccatgc ctttaataaa ggttcgtata aaagcaaatt attactttgg taccatattc 720
 gctccgcagt ttctatctt aataaatggg gatggttcct tgatcgtaaa 770

<210> 904

<211> 614

<212> DNA

<213> *Staphylococcus aureus*

<400> 904

ggttacttgt tgctgctttt gcgttatctc aaatgattat atcgccgttt ggtggtacgc 60
 tagctgacaa attaggaag aaattaatta tatgtatagg gttaatttta ttctcagtgt 120
 cagaatttat gtttgagtt ggccacaatt ttctggtatt gatggtatcg agagtgattg 180
 gtggtatgag tgctggtatg gtaatgccgg gtgtgacagg tttgattgca gatgttcac 240
 caagccatca aaaagcaaaa aactttggct acatgtcagc gattatcaat tctggattca 300
 ttttaggacc agggattggt ggatttatgg cagaagttc acatcgtagg ccattttatt 360
 ttgcaggtgc attaggcatt ttagctttca taatgtcagt tgtattgatt catgatccga 420
 aaaagtctac gacaagcggc ttccaaaaac ttgagcccca attattaaca aaaattaatt 480
 ggaaagtctt tattaccca gcaattttaa cgctcgtctt agcgttcggt ttatcggcat 540
 ttgaaacact gtattcttta tatacatcgt ataaagtaaa ttattcacct aaagatattt 600

cgattgcgat tacg 614

<210> 905
 <211> 411
 <212> DNA
 <213> *Pseudomonas aeruginosa*

<400> 905
 gaactacccc gtgaatcccg acctgatgcc cgcgctgatg gcggtcttcc agcatgtgcg 60
 gacgcgcatac cagagcgagc tcgattgcca gcgactcgac ctgaccccgc cgcacgtcca 120
 tgtattgaag cttatcgacg aacaacgcgg gctgaacctg caggacctgg gacgccagat 180
 gtgccgcgac aaggcactga tcacccggaa gatccgcgag ctggaggaa gaaacctggt 240
 ccgccgcgag cgcaaccca gcgaccagcg cagcttccag ctcttctca ccgacgagg 300
 gctggccatc caccagcatg cggaggccat catgtcacgc gtgcatgacg agttgtttgc 360
 cccgctcacc ccggtggaac aggccaccct ggtgcatctc ctcgaccagt g 411

<210> 906
 <211> 401
 <212> DNA
 <213> *Escherichia coli*

<400> 906
 gcaaggaccg ttctatcatg gaaccaaagc caatttggcg attggtgact tgctaaccac 60
 agggttcatc tctcatctcg aggacggtcg tattcttaag cacatctact tttcagcctt 120
 gatggagcca gcagtttggg gagctgaact tgctatgtca ctgtctggcc tcgagggtcg 180
 cggctacata tacatagttg agccaacagg accgttcgaa gacgatccga atcttacgaa 240
 caaaaaattt cccgtaatc caacacagtc ctatagaacc tgcgaacct tgagaattgt 300
 tggcgttggt gaagactggg aggggcatcc tgttgaatta ataaggggaa tgttggatto 360
 gttagaggac ttaaagcgcc gtggtttaca cgtcattgaa g 401

<210> 907
 <211> 742
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 907
 tacgatgaca ccagtccttg aattgaaaaa tgtcaattac tactatgatc ataaaaaagt 60
 gttagaaaat ataaacatta aaataaataa aggtgaattt ttagcaattg ttgacaaaa 120

tggtgctggt aaatcaacat tattgaagtt gattctaggg ttattacctt tacaaagtgg 180
 tgagatTTTT gttggaggta ttgattttaa aaataagaaa acatccatta aattaagcta 240
 tgtatcacia aaagcaaatg cctttaatc aggtttccca gcaagtgtta aagaagttgt 300
 ttttaagcga ttaacaaaga caaacgtct tttccaaaca tttaatagca aagataatga 360
 aaaagtgatt aaagtactag aaagactgaa tataagtgat ttaattcata aaaatatagc 420
 agaattatca ggtggtaaac aacaacgtgt aatgattgct cgagcattga tttcagaacc 480
 tgcagtatta gtacttgatg aaccaacgaa tggatttgat gcaaacatg taagtgaatt 540
 ttataatact ttagatcaat taaaacaaga aggtatcacc attatcttag ttactcatga 600
 tatcggtggt gtagcagata ctgctactga agtagcatgt ttaaataagc atttgcatTT 660
 ccatggtaca actgatgagt ttaaatcact tgatgaagtt gaaatttcaa aaatttatgg 720
 acatcctgta cgTTTTgtcg at 742

<210> 908
 <211> 352
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 908
 tagcaacctc cctttgatac aagaaagctt tttctacaag ctgtttaaca tgctcatcat 60
 ctagtgaata atagactact tttccttctt tacggatTTT tgetatacct aaatttttca 120
 ataatcttaa atgatgggat gccgtagccg ttgaagattc aatgatatta gctacatcac 180
 aaacacataa ctctccctct aaagacaaaa cataagcaat tttactctt gtatcatctg 240
 atagagcctt aaaaactttc gctacatcca taggattctg tttagcaagg tcttttttag 300
 ccctgtttac cttatcttca tgaatatagg taacttcaca catatctttt gt 352

<210> 909
 <211> 583
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 909
 gcgtagaacg tggacttgat ccattgaaga caatgcttgt ggcatgagc aattctgaaa 60
 attcaggtgg cctggctctc gctgcttccc ctatggcaaa aaaagtatta ggtatttcca 120
 atgttacaag gaaaaatgaa gttccggacc acccaaacctt aattattgta cctccacgca 180
 tgaaattata catgaagaaa aatcaagaaa ttaacaattt atataaccgc tttgtttcta 240

atgaagatca ttctgtattc agtgtcgatg aatcgtttct tgatgtgact gcttcgctga 300
 cctattttaa gtgtgacacc gcctataaac tggccaagat tattcaacgt gtgatttata 360
 accatatggg attgtatgta acaatcggaa ttggggaaaa tccgttgctg gccaaagttag 420
 cattggataa tgaagcaaag aatgcaccag gctttgtggc tgaatggcgc tatgaagatg 480
 tgccagaaaa agtttggcca atctcccctc ttacagaatt ttgtgggata ggaaatcgca 540
 tggctgctcg cttaaaaaag ctaggtattc ggtccattta tga 583

<210> 910
 <211> 231
 <212> DNA
 <213> *Candida albicans*

<400> 910
 atggcttggt ctgctgctca atgtgtctgt gctcaaaaat ccacttggtc atgtggtaaa 60
 caaccagctt taaaatgtaa ttgttctaaa gcttcagtag aaaatggtgt tccatcatca 120
 aatgatgctt gtgcttggtg aaaaagaaat aatcaagtt gtacttggtg tgctaagtct 180
 atttgtgatg gtactagaga tggtgaaact gatttcacta acttgaata a 231

<210> 911
 <211> 240
 <212> DNA
 <213> *Candida albicans*

<400> 911
 ctaagatgtc gtcgcaagat gaatctaaat tagaaaaggc aattagtcaa gactcttctc 60
 cagaaaacca ttccattaat gaataccacg ggtttgatgc ccatacaagt gaaaacattc 120
 agaatttagc cagaactttc actcatgatt ctttcaaaga tgactogtca gcaggtttat 180
 tgaaatactt aacctatag tcagaagtgc ccggggtaa tccatagaa catgaagaaa 240

<210> 912
 <211> 513
 <212> DNA
 <213> *Candida albicans*

<400> 912
 gctgaattat ctaaattacc aagagataat gatccagaag cacttttgaa atatgctgca 60
 ccactttgga aacaatactt attggtcagt tggagaacta ttgttcaaga ttggagatca 120
 ccaggatata tttattctaa aatctttttg gttgtttcag cagcattatt taatggattt 180
 tcatttttca aagctaaaaa caacatgcaa ggtttcaaaa atcaaatggt ttcggtggtt 240

atgtttttca ttccatttaa tacttttggtg caacaaatgt taccatactt tgtgaagcaa 300
 cgtgatgttt atgaagtgag agaagctcca tcaagaacat tcagttgggtt tgcattttatt 360
 gccggtcaaa ttacatcaga aattccttat caagttgccg ttggtaccat agcatttttc 420
 tgttgggtatt atccattagg attgtataat aatgctacac caactgattc tgtcaatcct 480
 cgaggtgttt taatgtggat gcttgttact gca 513

<210> 913
 <211> 609
 <212> DNA
 <213> *Candida albicans*

<400> 913
 ggtggtaaat taagagattt ggtcatccgt gatgctccac tcaacaaca attattgcaa 60
 gaagctaaaa ctttacctgc tttgacgtta actgctagac aattatgtga tttagaatta 120
 attttaaacg gagggttttc tccattaact ggattcttaa atcaagaaga ttataatagt 180
 gttgttaacg atttaagatt aagtagtggt aagaatgaat caaatggtaa aggtttatta 240
 tggccaatcc caatcacctt agatgttgat gagaccactt ctaaaaaaca ttctgttgggt 300
 gatagaattg tattaataga tttgagagat gaaactccat tggccatttt aactattgaa 360
 tctatttata aacctgataa aaaattagaa gcaaaaaaag tgttccgtgg tgatccagaa 420
 catcctgcta ataaatattt attagaaacc gctggcgatt attatatcgg tgggtgaatta 480
 caagggatca attatcctaa acattatgat tatgttgatg ctagaaaaac accaactgaa 540
 ttgagacaag aatttgaaaa attgggttgg gctcaagaaa atattgttgc ctttcaaac 600
 agaaatcct 609

<210> 914
 <211> 528
 <212> DNA
 <213> *Candida albicans*

<400> 914
 tcatggatta tttgttcgtg gtgctaacca aatggatggg ccagagatgg ttaccagtg 60
 tcctatccca cctggtgaaa catacttgta caacttcaact gttactgatc aagtgggaac 120
 ttattgggtat catagccata caggggttca gtatggagac ggtatgagag gtgtctttat 180
 tattgaagat gatgatctcc cgtatcacta cgatgaagaa gttgttttaa ctttaagtga 240
 ccattaccac aaatattcag gtgacatagg gcctgccttt ttaaccagat ttaatccgac 300

aggagcagaa ccgatccctc agaacttttt gttcaatgaa acaagaaatg ccacttggaa 360
 ggtcgaacct ggaaaaactt actttgttag gattcttaat gttggtggtt ttgtatcaca 420
 gtacttgtgg atggaagatc atgaatttac tattgttgag atcgatggcg tttacgttga 480
 aaaaaacacc actgatttga tttatatcac agttgctcaa agatatgg 528

<210> 915
 <211> 585
 <212> DNA
 <213> Candida albicans

<400> 915
 aaacggtcca gagttgaaga aaaagttgta tcgtcagatt tggctagggg cggggctagg 60
 tgttcttatt tgtataatca ttggtggcgc ttttattggt accttttacg ggttgggtaa 120
 agatatctgg ggaaaatcag aagacttgtg ggaagggata ttttgtatca ttgccacagt 180
 cttgatcact gctatgggta ttccaatggt gagaatcaac aagatgaaag aaaaatggag 240
 agttaaatta gcacaagctt taatcaaadc tccagaaaat aagaagaacc gattcaaatt 300
 gggatatctt gggaaaaagt acgcactttt tattttgcca ttcactactt gcttgcgtga 360
 aggttttagaa gctgttgttt tcgttggtgg ggtcgggtatt actagtcctg cttcatcttt 420
 cccaatccca gttattgttg gtataatttg tggctctgca gtgggtgcct tgttgtacta 480
 ctttgggtcc aatatgtcga tgcaaatctt cttgatcadc tccacttgta tcttgtactt 540
 gatcgtgct ggtttgttct ccagaggtgt ctggttcttt gagag 585

<210> 916
 <211> 560
 <212> DNA
 <213> Candida albicans

<400> 916
 tgttattggt tatggtggtg gccattggt tttcagtcg atgtcagaaa atgctatatt 60
 tggctgtaca tccatatata tcataacatt atttttatth gtcatactac aaatccccac 120
 tgctttggta aataatattg ccggtttatg tatattgaga ttcttgggtg gattctttgc 180
 tagtccttgt ttggccactg gtggtgctag tgttgcgat gtggttaaat tttggaattt 240
 accagttggg ttagccgctt ggagtttggg tgctgtttgt ggtcctagtt ttggtccatt 300
 ctttgggtca attttaactg tcaaagccag ttggagatgg actttttggt tcatgtgtat 360
 tatttctggg ttttcatttg ttatgttgtg tttcacttta cctgaaactt ttggcaaac 420

attattgtat cgcaaggcta aaagattgag agccatcacc ggtaacgaca gaatcacaag 480
 tgaaggagaa attgaaaata gcaaaatgac aagtcatgaa ttgatcattg atacattatg 540
 gagaccatta gaaatcaccg 560

<210> 917
 <211> 574
 <212> DNA
 <213> Candida albicans

<400> 917
 attccttggg ttggttctgc agcttcatat ggtcaacaac cttatgaatt tttcgaatca 60
 tgtcgtcaaaa agtatggtga tgtattttca tttatgttat tagggaaaat tatgacggtt 120
 tatttaggtc caaaaggta tgaatttggt ttcaatgcta aattatctga tgtttctgct 180
 gaagatgctt ataaacatct aactactcca gttttcggta aaggggttat ttatgattgt 240
 ccaaattcta gattaatgga acaaaaaaaaa tttgctaaat ttgctttgac tactgattca 300
 tttaaaagat atgttcctaa gattagagaa gaaattttga attattttgt tactgatgaa 360
 agtttcaaat tgaagaaaa aactcacggg gttgccaatg ttatgaaaac tcaaccagaa 420
 attactatct tcaactgctc aagatcttta tttgggtgatg aaatgagaag aatttttgac 480
 cgttcatttg ctcaattata ttctgattta gataaagggt ttaccctat taattttggt 540
 ttccctaatt tacctttacc tcattattgg agac 574

<210> 918
 <211> 647
 <212> DNA
 <213> Candida albicans

<400> 918
 gctctttgct tcaattatcc gaagetgaag atgaatctgt ctacaaggcc agctttgatg 60
 acaccgtgca agaaattgat ctgttattga ttgctttcaa agacctcctt agacttttac 120
 gacccaaaga taaatccaac aaattcgata catacgaatt gaaatttcat tctttgaagc 180
 acaaattgcg tgagttgcaa gtatttatta atgatcaaca acaagacaag ttgcatgaat 240
 ataggataaa gcatttccat ctacaagatc tgctgtgga taccatcaat aacgaatttg 300
 ctcgagacca attatttgct gatcgttcca ctaagaagac taagaaagaa atggaagcat 360
 ctataaatca acaaattgct agccaaaata acaaaataac aaaatccttg caagcatcga 420
 gacaattggt atcagcaggt atattgcaga gtgaattgaa cattgacaac attgatcagc 480

aaaccaagga tttatacaag ttaaatgaag gatttatcca attcaacgat ttgttaaata 540
gatctaagaa aattgtcaag tttattgaaa agcaagataa agctgaccgt caacgtatat 600
atgtgagtat ggggttcttc atactttggt gttcttgggt ggtttat 647

<210> 919
<211> 552
<212> DNA
<213> Glycine max

<400> 919
atccaagttg aaagagataa attgaacaag tatggtcgtc ccctattagg atgtactatt 60
aaacctaaat tggggttatc cgctaagaat tatggtagag ctgtttatga atgtcttctg 120
ggtaggacttg attttacc aaatgatgaa aatgtgaatt cccaaccatt tatgcggttg 180
agagaccggt tcttattttg tgccgaagcc atttttaa atcacaggctga aacaggtgaa 240
atcaaagggc attacttgaa tgcaactgcg ggtacatgcg aagaaatgat gaaaagagct 300
gtatttgcca gagaattagg cgttcctatc gtaatgcatg attatttaac agggggattc 360
actgcaaata ctagcttagc tcattattgc cgagataatg gtctacttct tcatatacac 420
cgtgcaatgc atgcagttat cgacagacaa aagaatcatg gtatgcactt tcgtgtacta 480
gctaaagcat tacgtttgtc tggtaggat catgttcacg ccggtaccgt agtaggtaaa 540
cttgaagggg aa 552

<210> 920
<211> 358
<212> DNA
<213> Homo sapiens

<400> 920
gctcaagggg caaatgcagc atgtacagca ttggcagtg tgctcagag gtggcagaac 60
tatttcacac aaaccagttt aggactacac aaattagtag catccagcat caggatatag 120
ctgtggattt tacaaccat tcctatttct aacttcagga attgatgatt ttcccagctc 180
atcttaaaat attactgctt taatcacaga tcagataaaa aggatattcag gcacaacctc 240
caactaaagt cctgttgtag catagacagt gaaatgctat gacatcagaa gactttaaaa 300
ttgcagctct tttcggatcc cccaaagtgt gtctgcacgc ttcttcaaac gggcctct 358

<210> 921
<211> 271

<212> DNA
 <213> Homo sapiens

<400> 921
 cggagtcAAC ggatttgGtc gtattggatg cctggtcacc agggttgctt ttaactctgg 60
 aaaagtggat attgtcgcca tcaatgaccg cttcattgac ctcaactaca tggctctacat 120
 gttccagtag gattttacct atggcaaatt ccatgcaccg taaaggctga gaatgggaag 180
 cttgtcatca gtggaaatcc cattaccatc ttccaggagc gagatccctc caaaatcaaa 240
 tggggcaatg ctgacgctga gtacgttgtg g 271

<210> 922
 <211> 239
 <212> DNA
 <213> Homo sapiens

<400> 922
 atggataatg atatcgccac gtcctgcatg gacaatggct ctcccatgtg caaggccagc 60
 ttagcaggcg acgatgcccc tccatcgtga ggcacccatg gcaccagggc atgatcgtgg 120
 gcatgggtca gaagaagtcc tacgtggaca atgaggccca gggcaagaga agcatcctga 180
 ccctgaaata ccctatcgag catggcattg tcaccaatgg agaagatctg gcaccacac 239

<210> 923
 <211> 365
 <212> DNA
 <213> Homo sapiens

<400> 923
 gccaaattgc caaaactcaa gtcacctcag taccatccag gaggctgggt attgtcctgc 60
 ctctgccttt tctgtctcag cgggcagtgc ccagagccca cccccccca agagccctcg 120
 atggacagcc tcaccacacc cacctgggcc cagccaggag ccccgctgg ccatcagtat 180
 ttattgcctc cgtccgtgcc gtccctgggc cactggcctg ggcctgttc cccaggtc 240
 tcagtgccac ccccccggc aggccttccc tgaccagcc aggaacaaac aagggaccaa 300
 gtgcacacat tgctgagagc cgtctcctgt gcctcccccg ccccatcccc ggtcttctgt 360
 ttgtg 365

<210> 924
 <211> 342
 <212> DNA
 <213> Homo sapiens

<400> 924
 caccctggat ttgcatacat tcttcaagat cccatttgaa ttttttagtg actaaacat 60
 tgtgcattct agagtgcata tatttatatt ttgcctgta aaaagaaagt gagcagtgtt 120
 agcttagttc tcttttgatg taggttatta tgattagctt tgcactgtt tcactactca 180
 gcatggaaac aagatgaaat tccatttgta ggtagtgaga caaaattgat gatccattaa 240
 gtaacaata aaagtgtcca ttgaaaccgt gatttttttt ttttccctgt catactttgt 300
 taggaagggt gagaatagaa tcttgaggaa cggatcagat gt 342

<210> 925
 <211> 552
 <212> DNA
 <213> Glycine max

<400> 925
 atccaagttg aaagagataa attgaacaag tatggtcgtc ccctattagg atgtactatt 60
 aaacctaaat tggggttatc cgctaagaat tatggtagag ctgtttatga atgtcttctg 120
 ggtggacttg attttaccaa agatgatgaa aatgtgaatt cccaaccatt tatgcgttgg 180
 agagaccgtt tcttattttg tgccgaagcc atttttaaat cacaggctga aacaggtgaa 240
 atcaaagggc attacttgaa tgcaactgcg ggtacatgcg aagaaatgat gaaaagagct 300
 gtatttgcca gagaattagg cgttcctatc gtaatgcatg attatttaac agggggattc 360
 actgcaaata ctagcttagc tcattattgc cgagataatg gtctacttct tcatatacac 420
 cgtgcaatgc atgcagttat cgacagacaa aagaatcatg gtatgcactt tcgtgtacta 480
 gctaaagcat tacgtttgtc tgggtggagat catgttcacg ccggtaccgt agtaggtaaa 540
 cttgaagggg aa 552

<210> 926
 <211> 286
 <212> DNA
 <213> Pseudomonas aeruginosa

<400> 926
 caggcctaac acatgcaagt cgagcggatg aaggagctt gtcctggat tcagcggcgg 60
 acgggtgagt aatgcctagg aatctgcctg gtagtggggg ataacgtccg gaaacgggcg 120
 ctaataccgc atacgtcctg agggagaaaag tgggggatct tcggacctca cgctatcaga 180
 tgagcctagg tcggattagc tagttggtgg ggtaaaggcc taccaaggcg acgatccgta 240
 actggtctga gaggatgatc agtcacactg gaactgagac acggtc 286

<210> 927
 <211> 643
 <212> DNA
 <213> *Enterococcus faecium*

<400> 927
 aggataggta ggagccgtag aaatcggaac gctagtttcg atggaggcgc tggtaggata 60
 ctaccctgc gttatggcca ctctaaccg caccactaat cgtggtggga gacagtgtca 120
 gatgggcagt ttgactgggg cggtcgcctc ctaaaaggta acggaggcgc ccaaaggttc 180
 cctcagaatg gttgaaatc attcgaagag tgtaaaggca gaaggagct tgactgagag 240
 accaacaagt cgagcagga cgaaagtcg gcttagtgat ccggtggttc cgcattggaag 300
 ggccatcgct caacggataa aagctaccct ggggataaca ggcttatctc cccaagagt 360
 ccacatcgac ggggaggttt ggcacctcga tgcgctcgcg tcgcatcctg gggctgtagt 420
 cgggtccaag ggttgggctg ttgcccatt aaagcggcac gcgagctggg ttcagaacgt 480
 cgtgagacag ttcggtccct atccgctcgc ggcgttgaa atttgagagg agctgtcctt 540
 agtacgagag gaccgggatg gacttaccgc tgggttacca gttgttctgc caaggttttt 600
 gctgggtagc tatgtaggga agggataaac gctgaaagca tct 643

<210> 928
 <211> 245
 <212> DNA
 <213> *Streptococcus pyogenes*

<400> 928
 gcgtgagtga aagaaggttt tcggatcgta aagctctggt gttagagaag aatgatggtg 60
 ggagtggaaa atccaccaag tgacggtaac taaccagaaa gggacggcta actacgtgcc 120
 agcagccgcg gtaatacgta ggtcccagc gttgtccgga tttattgggc gtaaagcgag 180
 cgcagggcgg tttttaagtc tgaagttaa ggcattggct caaccaatgt acgctttgga 240
 aactg 245

<210> 929
 <211> 240
 <212> DNA
 <213> *Streptococcus pneumoniae*

<400> 929
 ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag ggaatcttcg 60

gcaatggacg gaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt tcggatcgtg 120
aagctctggt gtaagagaag aacgagtgtg agagtggaaa gttcacactg tgacggtatc 180
ttaccagaaa gggacggcta actacgtgcc agcagccgcg gtaatacgtg ggtcccagac 240

<210> 930
<211> 242
<212> DNA
<213> Streptococcus agalactiae

<400> 930
cacggcccag actcctacgg gaggcagcag tagggaatct tcggcaatgg acggaagtct 60
gaccgagcaa cgccgctga gtgaagaagg ttttcggatc gtaaagctct gttgtagag 120
aagaacgttg gtaggagtgg aaaatctacc aagtgacggt aactaaccag aaagggacgg 180
ctaactacgt gccagcagcc gcggaatac gtaggtcccg agcgttgccc ggatttattg 240
gg 242

<210> 931
<211> 250
<212> DNA
<213> Enterococcus faecium

<400> 931
gtgcattagc tagttggtga ggtaacggct caccaaggcc acgatgcata gccgcacctg 60
agagggtgat cggccacatt gggactgaga cacggcccaa actctacggg aggcagcagt 120
agggaatctt cggcaatgga cgaaagtctg accgagcaac gccgctgag tgaagaaggt 180
tttcggatcg taaaactctg ttgtagaga agaacaagga tgagagtaac tgttcatccc 240
ttgacggtat 250

<210> 932
<211> 263
<212> DNA
<213> Enterococcus faecium

<400> 932
tgcctataca tgcaagtoga acgcttcttt ttccaccgga gcttgctcca ccgaaaaag 60
aggagtggcg aacgggtgag taacacgtgg gtaacctgcc catcagaaag ggataaact 120
tggaacacag tgctaatacc gtataacaaa tcaaaaccgc atggttttga tttgaaaggc 180
gctttcgggt gtcgctgatg gatggaccgc cgggtgatta gctagtgggt gagtaacgg 240
ctcaccaagg ccacgatgca tag 263

<210> 933
 <211> 267
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 933
 ggcgtgccta atacatgcaa gtcgaacgct tctttcctcc cgagtgcttg cactcaattg 60
 gaaagaggag tggcggacgg gtgagtaaca cgtgggtaac ctacccatca gagggggata 120
 acacttgaa acaggtgcta ataccgata acagtttatg ccgcatggca taagagttaa 180
 aggcgctttc ggggtgctgct gatggatgga cccgcggtgc attagctagt tggtgaggta 240
 acggctcacc aaggcgacga tgcatag 267

<210> 934
 <211> 200
 <212> DNA
 <213> *Klebsiella pneumoniae*

<400> 934
 caggcctaac acatgcaagt cgagcggtag cacagagagc ttgctctcgg gtgacgagcg 60
 gcggacgggt gagtaatgtc tgggaaactg cctgatggag ggggataact actggaaacg 120
 gtagctaata ccgcataatg tcgcaagacc aaagtggggg accttcgggc ctcatgcoat 180
 cagatgtgcc cagatgggat 200

<210> 935
 <211> 635
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 935
 acacggtcca gactcctacg ggaggcagca gtagggaatc ttccgcaatg ggcgaaagcc 60
 tgacggagca acgcccgctg agtgatgaag gtcttcggat cgtaaaactc tgttattagg 120
 gaagaacata tgtgtaagta actgtgcaca tcttgacggt acctaatacag aaagccacgg 180
 ctaactacgt gccagcagcc gcggtaatac gtaggtggca agcgttatcc ggaattattg 240
 ggcgtaaagc gcgcgtaggc ggttttttaa gtctgatgtg aaagcccacg gctcaaccgt 300
 ggagggcat tggaaactgg aaaacttgag tgcagaagag gaaagtggaa ttccatgtgt 360
 agcggtgaaa tgcgcagaga tatggaggaa caccagtggc gaaggcgact ttctggtctg 420
 taactgacgc tgatgtgcga aagcgtgggg atcaaacagg attagatacc ctggtagtcc 480

acgccgtaaa cgatgagtgc taagtgttag ggggtttccg ccccttagtg ctgcagctaa 540
 cgattaagc actccgcctg gggagtacga ccgcaagggt gaaactcaa ggaattgacg 600
 gggaccgca caagcgtgga gcatgtggtt taatt 635

<210> 936
 <211> 243
 <212> DNA
 <213> *Enterococcus faecalis*

<400> 936
 gcattagcta gttggtgagg taacggctca ccaaggcgac gatgcatagc cgacctgaga 60
 gggtgatcgg ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag 120
 ggaatcttcg gcaatggacg aaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt 180
 tcggatcgtg aaactctggt gttagagaag aacaaggacg ttagtaactg aacgtcccct 240
 gac 243

<210> 937
 <211> 274
 <212> DNA
 <213> *Staphylococcus hominis*

<400> 937
 cgtgcctaata acatgcaagt cgagcgaaca gacgaggagc ttgctccttt gacgttagcg 60
 gcggacgggt gagtaacacg taggtaacct acctataaga ctgggataac ttcgggaaac 120
 cggagctaata accggataat atttcgaacc gcatggttcg atagtgaaag atggctttgc 180
 tatcacttat agatggacct gcgccgtatt agctagttgg taaggtaacg gcttaccaag 240
 gcaacgatac gtagccgacc tgagagggtg atcg 274

<210> 938
 <211> 200
 <212> DNA
 <213> *Staphylococcus haemolyticus*

<400> 938
 acacgtgggt aacctaccta taagactggg ataacttcgg gaaaccggag ctaataccgg 60
 ataatatctc gaaccgcatg gttcgatagt gaaagatggt tttgctatca cttatagatg 120
 gacccgcgcc gtattagcta gttggtaagg taacggctta ccaaggcgac gatacgtagc 180
 cgacctgaga gggatcgg 200

<210> 939
 <211> 287
 <212> DNA
 <213> *Enterococcus faecium*

<400> 939
 ccttttagtg tattgtagg agagcgttct aagggcgtcg aaggcagatc gtgaggactg 60
 ctggagcgtc tagaagtgag aatgccggtg tgagtagcga aagacaggtg agaatcctgt 120
 ccaccgaatg actaaggttt cctggggaag gctcgtccgc ccagggttag tcgggaccta 180
 agccgaggcc gacaggcgtg ggcgatggat aacaggttga tattcctgta cccgttgttt 240
 ttgtttgagc aatggagggg cgcaggaggg taaggaatgc agacgat 287

<210> 940
 <211> 281
 <212> DNA
 <213> *Proteus mirabilis*

<400> 940
 caggcctaac acatgcaagt cgagcggtaa caggagaaag cttgctttct tgctgacgag 60
 cggcggacgg gtgagtaatg tatggggatc tgcccgatag agggggataa ctactggaaa 120
 cgggtggctaa taccgcataa tgtctacgga ccaaagcagg ggctcttcgg accttgcaact 180
 atcggatgaa cccatatggg attagctagt aggtggggta aaggctcacc taggcgacga 240
 tctctagctg gtctgagagg atgatcagcc aactggggac t 281

<210> 941
 <211> 200
 <212> DNA
 <213> *Proteus vulgaris*

<400> 941
 tggttgatca tggctcagat tgaacgctgg cggcaggcct aacacatgca agtcgagcgg 60
 taacaggaga aagcttgctt tcttgctgac gagcggcgga cgggtgagta atgtatgggg 120
 atctgcccga tagaggggga taactactgg aaacggtggc taataaccgca tgacgtctac 180
 ggaccaaagc aggggctctt 200

<210> 942
 <211> 309
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 942
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 gaaagacggt cttgctgtca cttatagatg gatccgcgct gcattagcta gttggtaagg 180
 taacggctta ccaaggcaac gatgcatagc cgacctgaga gggatgatcgg ccacactgga 240
 actgagacac ggtccagact cctacgggag gcagcagtag ggaatcttcc gcaatgggcg 300
 aaagcctga 309

<210> 943
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 <212> DNA
 <213> *Klebsiella oxytoca*

<400> 943
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 cgggtgagta atgtctggga aactgcccga tggaggggga taactactgg aaacggtagc 120
 taataccgca taacgtcgca agaccaaga gggggacctt cgggcctctt gccatcggat 180
 gtg 183

<210> 944
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 <213> *Mus musculus*

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 ctactacag gtgacctgca gcagccggga atggctggct atagcctcta ataagtttca 180
 gttttagttg tagagtaggg atattccacc tgttcggcac acctgctgga gctgtggggc 240
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 acatcagtct aggctggagt caactgtctc taagacgcac aaaccaaacc aaaattacag 480
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 tactcggg 548

<210> 945
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<212> DNA
 <213> Dictyostelium discoideum

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 gcaattatga agacatcaca tcatgataac attgtaaatt acattgatag ttatatagtg 180
 aacgatagag aactttgggt tgcaatggag tttatgggtg gtggttgtht aacagacatt 240
 ttagaggcat ttgataatat caaaatgagt gagattcaaa ttgcttatgt ggttaaagag 300
 accttgaagg cattgcaata cattcatagt cttcatcgta ttcatagaga tataaagagt 360
 gataatatht tattgggctc agagggtagt gtaaagattg ctgattttgg ttatgccgct 420
 caattaactc aaaaacaaca aaaacgtaat accgtcgttg gtaccctta ttgatggcc 480
 ccagaactca ttagaggta cgattatggt gtcaaggttg atatttggtc tttgggtatc 540
 atgatgatgg aatggctga aggtgaacca ccttata 577

<210> 946
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 <213> Mus musculus

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 aacatggccc cgagatctac gtaccgggta cccattgaga ggctggaaat acaggctggt 180
 gtctgtaatg cacacatgcc cagggttcgt cactagaggt gttaccatct ctgctttgca 240
 ctccatgtgc agcttttcag aaacactttg gaacctgcaa agatgtttcc agcaaaagta 300
 agaaaagtta ggaaccaatc cactgcctcg gcttaacctc agtgtgagtg agcttgctta 360
 cctgccgaaa cactacagtc atcaagtggc tgcttaaata aggttgacat gctttcaaat 420
 ggcacaatgg aggctggct tgtttattaa ttgaagagct tacatatcac agaacaat 480
 gtctcctaac tgatcagtc tgaagctctt tctccatcat gtgacttct acttttata 540
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 ctaggaggaa gctgagacag gagcttgggc cacagagaaa gaccctacco ttagcacact 660
 tcctttatca gggttagaac acataattac aattgcttht aggtcagtht catttctcca 720
 tataaaacca ctcaaagatg cttttctac tctaaaatg cttaactaaa aaataactcc 780

atttctgatt tgtgaattta aaaagtagtg tggaaacaac taaattatca atattcttgg 840
 atgattactt tgttaaataa ctggattaac agtaaacttc agggctctaga agtgcagctc 900
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<210> 947
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 <213> Dictyostelium discoideum

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 agaaagggtcc aggttttaggt gcagttttcg gtgaacttag caaagggtgat ggtgttacca 180
 gtggtttaaa aaaagttacc aacgatatga aatccaaaaa tttcaccgac aaatcatcag 240
 ttgttaaagc tgctgatact aaagtcgcca aagttgatgc tccatctaga ccagccgttt 300
 ttgctctcca aggtaacaaa tgggccattg aatatcaagt taacaacaaa gaaattgtca 360
 ttgccgagcc agatagtcgt caaactgttt acattttcca atgtgtaaac tctttagttc 420
 aaatcaaagg taaagttaat gcaattactc ttgatggttg taaaaagact tcaatcgttt 480
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<210> 994
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<210> 995
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<210> 997
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<400> 997
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<400> 999
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<400> 1005
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<400> 1006
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<213> synthetic construct

<400> 2824
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<210> 2825
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<212> DNA
<213> synthetic construct

<400> 2825
atcgtctgca ttccttagc 19

<210> 2826
<211> 18
<212> DNA
<213> synthetic construct

<400> 2826
caggcctaac acatgcaa 18

<210> 2827
<211> 18
<212> DNA
<213> synthetic construct

<400> 2827
agtcccagtg tggctgat 18

<210> 2828
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<400> 2828
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<210> 2829
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<213> synthetic construct

<400> 2829
aagagcccct gctttggt 18

<210> 2830
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<212> DNA
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<400> 2830
tctctgatgt tagcggcgg 19

<210> 2831
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<212> DNA
<213> synthetic construct

<400> 2831
tcaggctttc gccatt 17

<210> 2832
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<212> DNA
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<400> 2832
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<210> 2833
<211> 18
<212> DNA
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<400> 2833
cacatccgat ggcaagag 18

<210> 2834
<211> 17
<212> DNA
<213> synthetic construct

<400> 2834
ataggtcggc ggttcat 17

<210> 2835
<211> 20
<212> DNA
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<400> 2835

cccgagtatc tggagacag 20

<210> 2836
<211> 22
<212> DNA
<213> synthetic construct

<400> 2836
ctaaaattgg tgaagtgca gc 22

<210> 2837
<211> 22
<212> DNA
<213> synthetic construct

<400> 2837
atatggtggt tcagattctg cc 22

<210> 2838
<211> 21
<212> DNA
<213> synthetic construct

<400> 2838
ccttagttat ctcggtgccca g 21

<210> 2839
<211> 22
<212> DNA
<213> synthetic construct

<400> 2839
ggaagccaca ctgctacaca gg 22

<210> 2840
<211> 22
<212> DNA
<213> synthetic construct

<400> 2840
ccaccggttt aacttggat cc 22

<210> 2841
<211> 22
<212> DNA
<213> synthetic construct

<400> 2841
aattgatggt acacgaccag tg 22

<210> 2842
 <211> 240
 <212> DNA
 <213> *Streptococcus dysgalactiae*

<400> 2842
 ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag ggaatcttcg 60
 gcaatggacg gaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt tcggatcgta 120
 aagctctgtt gttagagaag aatgatggtg ggagtgaaa atccaccatg tgacggtaac 180
 taaccagaaa gggacggcta actacgtgcc agcagccgag gtaatacgta ggtcccgagc 240

<210> 2843
 <211> 290
 <212> DNA
 <213> *Acinetobacter baumannii*

<400> 2843
 ggtaccaagt atgatatgga tatggacaat aaattagcat atctgaatgc tgaaattcgc 60
 ccttggggtg ctagcacgaa tccatgggct caaggtttat atgtagctgc aggtgcagct 120
 tatgttgata accaatatga tttaacaaaa aatgtaggta caaacgcttc cgttgaaatt 180
 gatggaaacc gttttaatgg tggtgctaac ggagtgagca ttgccggtaa tttaaaatat 240
 gataatgata ttgctccata tattggtttt ggttttgctc caaaattcag 290

<210> 2844
 <211> 536
 <212> DNA
 <213> *Acinetobacter baumannii*

<400> 2844
 cttatcgaaa cgcttacgtc tgaatcatgc atatgggcaa ttaattgctc ttatttttgt 60
 gccattatg attttaacgt gtgttggggc ttttctgggt ttaactgaaa catcacgttc 120
 tgcaaagcaa caacaattgc atcatgcctc agcgattttg gcacgctaca atcaaattgc 180
 taaagatctc tacacattag tagaactaca accagatgaa tatgatcatg ctcaacatat 240
 tatgcaaagt atgtttagcg agaaaaatct aaagcgtgct gctttaattg atagtaatgg 300
 tcgacttat ttaagtatcg gttatcgaga taatcgttac tggcctaact tcacacaaaa 360
 caataacttt tttgggccga tctctataa ccataataat atttatggag tccgtatcat 420
 tgataccgca ggggaagcccc ctgtctggct cttgattgaa atggataatc aaccacttga 480
 attagcgcgt tatcgcatc tgattgcttt ggtcattacc ggcctaatga ctttat 536

<210> 2845

<211> 529

<212> DNA

<213> Acinetobacter baumannii

<400> 2845

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cacagcaaca aactactcaa aatttaattg cagagctttt ggaaaagcac aacattacag      60
gattagtaaa tgcagcgggc gtattaatta tgcgttctat gcttgaagca aaaccggaag     120
attggcaaac actttttgcg gtgaatgtca tggcaccat cgcaattagt caacaacttg     180
ccaagcactt ttgtgaaaaa aaacagggaa gtattgtcac tattagctca aatagtgcac     240
gtatgccacg tatgcagctc ggcatgtatg caacgagtaa agcggcactg agtcattact     300
gccgtaatct tgcacttgaa atcgcacctc atcaagtcag actcaatata gtttcgccag     360
gttctacttt aacgcaaatg caacaacagc tttggacaga caattcgctt ccacctgctg     420
ttattgatgg cgacttaaac cagtaccgca ctggcattcc acttagaaaa cttgcccagc     480
ctgaagatat cgctaatacc gttagctttt tactttcaga ccaagcagc                   529
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<210> 2846

<211> 414

<212> DNA

<213> Acinetobacter baumannii

<400> 2846

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tgagtatcc caaaattgct agctacagta tgcctcaagc ccatgagttt acgccaata      60
aaaccattg gcagttacat accaatcgcg ccgtgttact ggtccatgac atgcagcagt     120
atTTTTtaga tttttatgac caaactcaag cacctattcc agagctcatt agaaatacca     180
aagaactgat taaaaccgca cgtaaattta atattccagt ggtttatact gcacagcccg     240
gtaatcagac gcctgaacac cgtcaactat tgaccgattt ttggggaacc gggttaaaag     300
atgatccgta tattactcag attttgccgg aaatctcgcc tcagaaaaat gatactgttt     360
taacaaaatg gcgttatagc gcatttaagt tttccccact tgaacaactc atgc           414
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<210> 2847

<211> 500

<212> DNA

<213> Acinetobacter baumannii

<400> 2847

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gcacattggg ataatgagac acaaaatgct tttgttgaat taaagcaaaa acttaatgac     60
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caatggaatg ctaaactgac ttacaactat cttgatacga agcataatag ccgtcttctc 120
 tattactatg gttatccaaa atctgatggg tccgggtgtt ctctaacgcc ttgggggtgga 180
 caagaacatc aagaaaaaca tgctgtagat tttaatctcg aagggaacct taagctatct 240
 aaccgagaac atgaagcaac tctaggctac agctatgtac gtaatcatca acaagataaa 300
 caatctacag gaacgattaa cgatagtaac gttataaagt caactactac cgattgggca 360
 agttggacac cgcaatctat aacttgggtca gatttcacag aagcggccaa ctataaacia 420
 aatattaact caatttatgc cgcgacacgt ttacatctta atgaagattt aaaactttta 480
 cttgggtgcaa actatgttca 500

<210> 2848
 <211> 561
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2848
 tgtatctcga tttggttggtg aaccaatatt cgggtccagca agttgtgcca gtgattgtga 60
 aaaatgatga gtacttcata caaaaaaaga agctgattga tgaattagaa attaacatcc 120
 ctcaagagtt attaacaaac actgacacat ctttatcgaa tcaagatggt ttgaccttgg 180
 ggttttagtg tgatgcgagt gattggatat ctttagataa attaaaagat gtaagctatg 240
 aatatcaatc ttcgaaccaa tactttaagc tcaattttcc gcccgcttgg atgcccactc 300
 aagttttggg taaagactca tggataaagc cggaagtgcg tcagtctggt atagggtctgc 360
 tcaataacta tgatttttat acatatagac cctatcaagg cggttcaacc agtagtttat 420
 ttactgagca gcgttttttc tctccgtagg gggtcattaa aaactctggt gtctatgtca 480
 aaaaccaata caaaaatgaa ggtaacgccc agtctgtaga taatgacggc tatcgtcgtt 540
 atgacacatc ttggcagttt g 561

<210> 2849
 <211> 501
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2849
 tcacttggtta cacctgtgat ggcacaagca actttttctaa tttggccgat ttatccaaaa 60
 attgaagcca atgaaaaggc aactgctggt tggcttcaaa atacgggtaa gaccgatgcg 120
 atgggtgcaaa ttcgggtatt taaatggaat caagatggct taaaagataa ctatagttag 180

caatcagaaa ttataccaag cccgctgta gctaaaatta aagcaggcga gaagcatatg 240
 cttcgcttaa ccaaaagcgt caatttgccg gatggcaaag agcagtcata tcgtctgatt 300
 gtagatgagt tgccgatccg actttctgat ggcaacgagc aagatgcttc taaagtaagt 360
 ttccaaatgc gttactcaat tccattgttt gcttatggga aaggaattgg cagtggatta 420
 accgaagaaa gtcaaaaact taatgcaaaa aatgctttag caaaaccggt tttacagtgg 480
 tcagttcgca ataataca a 501

<210> 2850
 <211> 501
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2850
 attgatcgaa atcaccaaaa tggaggatcc atcatgatcc ttcggcataa taatttatgc 60
 aaaagrattt tgctgatattt attgtcgggt ggatgtttaa atattccaaa tactgtgttt 120
 gcaggcgatt tgctccacc accaagagac attaataaaa ttaatcaact ttttaaactg 180
 tatctcgatt tggttgtgaa ccaatattcg gtccagcaag ttgtgccagt gattgtgaaa 240
 aatgatgagt acttcataca aaaaaagaag ctgattgatg aattagaaat taacatccct 300
 caagagttat taacaaacac tgacacatct ttatcgaatc aagatgtttt gaccttgggg 360
 tttagtggtg atgtagtgga ttggatatct ttagataaat taaaagatgt aagctatgaa 420
 tatcaatctt cgaaccaata cttaagctc aattttccgc ccgcttggat gccactcaa 480
 gttttgggta aagactcatg g 501

<210> 2851
 <211> 515
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2851
 gcactgggtg aaactgaact ctggccaaat ttaatcgatc aagccaaatt acagcatgta 60
 ccttgtttgc tgcttaatgc tcggttgtea gaaaaatctg caaaaggata tggcaaagtc 120
 tcgggtttaa ccgaggtat gttaaaacag ctggactggg tgtagctca agatagtgca 180
 actcgtcagc gttatgttga gcttggttta gacgaacaca aaagtcaggt cgttggtaat 240
 attaagtttg atattcatgc gccagaggct tttattaaac aagctgcca attgcatcag 300
 caatggatc tggaaaatcg gcaggttggt acgattgcca gtacacatgc accgaagaa 360

caacaaatth tggaagcact cgcaccttat ttaaattcag atcgtgagtt ggtgtgtatt 420
 gtgggtgcctc gtcacctga gcgtttcgat gaagtatttg aaatttgcca aaatttaaat 480
 ttaattacgc atcgtagaag tatgggcca agtat 515

<210> 2852
 <211> 454
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2852
 gctatctggt agtcaattta tatatgcagc agatcctcag ctcaattcaa gttttaaagt 60
 acaagctaaa attgaaaatg gctgttcaat agataatatt gagcaaaaaca tggattttgg 120
 taaatactct gctttatcaa aaaataaagt agtgactaat attattaata gcaaagggtc 180
 ttggaatata cgttgtacgg aaagtttacc tgtaagtgtt tctatagatg gtggtgaaaa 240
 ccttcaaaat aatacaagac gtatgaagaa tggttcgtcc actaattatt tatcttacia 300
 gctatataac tctagtagtt tatccaatga atatattgta ggtaataaat atttattgcc 360
 tgctacaaca cctacaaacc gtctggcaaa ttttgaata tatgggtgtcg ttgatttaga 420
 aaataataat gaacccata cggccggaat ttat 454

<210> 2853
 <211> 517
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2853
 atatgaaaa cattcagaaa tcacttcttg cagcattaat agttgctggt tatgcggtaa 60
 atactcaagc agctgttact ggtcagggtg acgttaaatt aaatatctca acaggctgta 120
 ctgtaggtgg tagtcaaact gaaggaaata tgaacaagtt tggacttta aatthtggtta 180
 aaacttccgg tacttggaac aacgtattaa cagctgaagt tgcttcagca gcaacagggtg 240
 gcaatatttc tgtgacttgt gacggaacag atcctgttga ttttacagtc gcaattgacg 300
 gtgggtgaacg tacagaccgc actthaaaaa atactgcttc tgctgatgta gttgcatata 360
 acgtttatcg tgatgtgca cgtacaaacc tttatgttgt aaaccaacca caacagttca 420
 ctacagtaag tggccaagct actgccgtac caatthtcgg tgcaattgct ccaaacacag 480
 gtacaccaaa agcacaaggc gattataaag atactct 517

<210> 2854

<211> 506
 <212> DNA
 <213> *Acinetobacter baumannii*

 <400> 2854
 tttaaattgga gggaagatga tattcaatcg tggttcagca ttataaattt cttatTTTTT 60
 aatttcttta gtaaagtcgg gtgaaatcgg agctaaatta actagtcaaa ttgaattatt 120
 gccttcttgt tctgtaata ataatgtgt agaaaataat gcaacaaatt taaatTTTgg 180
 aactatagat tttggtgaag ctaccacagc ttttaaagg gttttagaag ctagttagt 240
 taataatggt aattcaggtt ttcagatcga gtgtgctggt atttcaactg taaaaataat 300
 atttggagca ggaaataatg atagtaatat tccagcttca tttcacaaa attattatca 360
 tgctttaagt aatggtagag attttattgc ttataacttg ctctatgggt taaataaaca 420
 agtcattaaa gcaaatgaag cttttattct taatgatatg aataataaaa agaatatcga 480
 tatttttgggt caagcaaccc atgatg 506

<210> 2855
 <211> 542
 <212> DNA
 <213> *Acinetobacter baumannii*

 <400> 2855
 gcttccttac gttcctctgc aattcctgtc tctgaccctg cgtccggtct acgcattacc 60
 gagatttttt actccttgca ggggtgaagca aatgcctctg gcctaccgac tgtatttatt 120
 cgtctcacag gttgcccttt acgggtgtagt tattgcgaca ccacctattc ttttgaaggt 180
 ggccaacgct tatcacttga gcacattatt gaaacggctg aaaaatatca aacgccttat 240
 atttgtgtga ctggcgggtga accacttgca caaccaatt gcttaatttt attacaacgt 300
 ttatgtgacg ccggttttga tgttcccta gaaaccagtg gcgctcttga tgtatcaaga 360
 gtggatccgc gtgtttcaaa agttctcgac ttaaagacc caacttctgg tgaagaacat 420
 cgtaatctca tcagtaatct tgaccattta acaccgctg accaaatcaa atttgtgatt 480
 tgtaatcgtg aagactatga atggtaaaaa caacaagttg aacaatatca actgcaaacc 540
 aa 542

<210> 2856
 <211> 540
 <212> DNA
 <213> *Acinetobacter baumannii*

<400> 2856
taggtaatgc tgggtgttggg gctttctggc gcttaaacga tgctctatct cttcgtacag 60
aagctcgtgg taacttatac tttgacgaaa aattctggaa ctatacagct cttgctggct 120
taaacgtagt tcttgggtgg cacttgaagc ctgctgctcc tgtagtagaa gttgctccag 180
ttgaaccaac tccagttgct ccacaaccac aagagttaac tgaagacctt aacatggaac 240
ttcgtgtgtt ctttgatact aacaaatcaa acatcaaaga ccaatacaag ccagaaatcg 300
ctaaagttgc tgaaaaatta tctgaatacc ctaacgctac tgcacgtatc gaaggtcaca 360
cagataacac tgggtccacgt aagttgaacg aacgtttatac tttagctcgt gctaactctg 420
ttaaatacgc tcttgtaaac gaatacaacg ttgacgcttc tcgtttgtct actcaagggt 480
tcgcttggga tcaaccgatt gctgacaaca aaactaaaga aggtcgtgct atgaaccgtc 540

<210> 2857
<211> 584
<212> DNA
<213> *Acinetobacter baumannii*

<400> 2857
tcgtgtgtta ttgcttgatg aaccatthgg tgcactagat gctaaggctc gtaaagaatt 60
acgccgctgg ttacgtaact tgcatgatga gctgcatatc acttcaattt tcgtaacca 120
tgaccaagaa gaggcacttg aagtagccga ccaaattatt gtgatgaata aaggtaacgt 180
cgaacaaatt ggttctccgc gtgaagttha cgaaaaacct gcaacaccat ttgtatttga 240
tttcttgggt caagcaaatac gttttgaagg tgaacatgca agcggtatta tccgtattgg 300
caatgatcgt atcgaattac cgaccacagt tcaggtccg caaggaaaag taattgcttt 360
tgcccgtcct gatgagttac atattcatgc gcaaccacag gcaatacaaa ttgaagcaac 420
ttttgtacgt gaagtctgga ttgctggaaa agtagtgccg gaattacaag atcgtaatgg 480
acgtttaatt gagattgctc tgagcagtga agctgcaaaa caacatgcat ttaaaccaaa 540
tcaaactggt tgggtaagtg catctcaact tcacctattt gcag 584

<210> 2858
<211> 427
<212> DNA
<213> *Acinetobacter baumannii*

<400> 2858
atgcctattt ccaatcaaga tttgcgcaaa gctggactta aagttaccct tccacgaatt 60
aagatthtgg aattattaga aaattcaaaa caacatcctc ttagcgccga agatatttac 120

aagactttgt tagagcaagg ggaagatgtc ggacttgcca cagtttaccg tgtgtaaca 180
caatttgaag ctgcgggtat tattcaacgt catcattttg aaaataacca ttctgttttc 240
gaaatcatgc aagaagatca tcacgatcac ttagtatgcc aaaactgtaa caaagtcatt 300
gaatttacta atgatgttat cgagaaagaa cagcattctg tagcagaaca acatggggtt 360
accttaacgg gtcactcatt aaatctctat ggttactgta atgaacctga atgtcaggaa 420
gcattgc 427

<210> 2859
<211> 355
<212> DNA
<213> Acinetobacter baumannii

<400> 2859
agatggatgt tgatgctctt gaaaaaacia tggcgcatct tcaagctgaa ggtaaagtgt 60
ttgcttgtgt cgttgcgaca gcgggtacaa ctgatgctgg tgcaattcat ccattgaaaa 120
aaatccgtga aattactaat aagtatggtt catggatgca tatcgatgct gcgtggggcg 180
gtgcactgat cttgtcaaat acctatcgtg caatgcttga tggattgag ctgtctgatt 240
cgatcactct cgacttccat aagcattatt tccaaagcat cagctgtggc gcgttcttgt 300
taaaagatga agcgaactat cgtttcatgc attatgaagc tgagtacttg aactc 355

<210> 2860
<211> 564
<212> DNA
<213> Acinetobacter baumannii

<400> 2860
gatgaatacc gccattacg tttgcaaaat ggtttatatg tgcaacgta tgcaccaatg 60
ctacgtattg ctgtgccgta tggcttaatg aactcaaac aattacgtaa aattgctgaa 120
gtatcaactc aatatgaccg tggctatgca cacgtatcta cgcgtcaaaa tattcagcta 180
aactggcctg cacttgaaga tgtgccagaa attttagctg aactcgcaac tgtacaaatg 240
catgccatc aaaccagtgg taactgtatt cgtaacacga ctactgacca gtatgcaggt 300
gtagttgctg gtgaaattgc tgatccacgc ccaacatgtg aattgattcg tcagtggagt 360
acattccacc cggaatttgc attcttacca cgtaaattta aaattgcoct ttctgcactt 420
gaagaaaaag accgtgcagc aacagcattc catgatattg gtgtgtatat cgtgcgtaat 480
gaagcaggcg agatgggcta caaaatcatg gtgggtgggt gtttaggcoy tactccgatt 540

attggtagtg tcattcgtga gttt 564

<210> 2861
 <211> 310
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2861
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 ggttatattg gctacgatgc tgtccgctac atcgagccac gtttaaagaa tgtacctgcg 120
 gctgatccga ttacgctgcc agatttatgg ttgatgctct caaagacagt cattgttttt 180
 gacaatctta aagatacgct atttttaatt gtgcatgctg atacagagca gagtaatgct 240
 tatgaagacg ctcaacaaaa attagatcaa ttagaacagt tgettggcgac tccagttagt 300
 ttgcaagcgc 310

<210> 2862
 <211> 530
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2862
 ttaaactgtc tgccgatgac ttaataaag tggacgaagg tactttaacg attgcaacaa 60
 cacatactca agcacgttat gtattaccac caatcgtaa tcaatttaag aaactatttc 120
 caaaagtcca tttgatattg caacaagcaa gccctgtcga aattgcagaa atgcttttac 180
 aagtggaagc tgatattggc atcgcgacag agtctttaac aactgaagaa aatttagcaa 240
 gcattccata ctatcaatgg cagcacagca ttattactcc tcaagatcac ccacttacac 300
 agctcgataa aattgatctt gatgctttat ctgaataccc actaattact tatcacggcg 360
 gttttacagg tcgttcaaag atcgataaag catttgaaga tgcacaaatt gatgccgata 420
 ttgtaatgtc tgctcttgat gccgatgta tcaaaactta cgttgaactc ggcatgggtg 480
 tcggaattgt caatgatgtc gcttacgatg cagagcgtga ctatcgttta 530

<210> 2863
 <211> 534
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2863
 cgacgcttta tctcttcgta ctgaagctcg tgctacttat aatgctgatg aagagttctg 60

gaactataca gctcttgctg gcttaaacgt agttcttggg ggtcacttga agcctgctgc 120
 tcctgtagta gaagttgctc cagttgaacc aactccagtt gctccacaac cacaagagtt 180
 aactgaagac cttaacatgg aacttcgtgt gttctttgat actaacaat caaacatcaa 240
 agaccaatac aagccagaaa ttgctaaagt tgctgaaaaa ttatctgaat accctaacgc 300
 tactgcacgt atcgaaggtc acacagataa cactggtcca cgtaagttga acgaacgttt 360
 atcttttagct cgtgctaact ctgttaaadc agctcttgta aacgaataca acgttgatgc 420
 ttctcgtttg tctactcaag gtttcgcttg ggatcaaccg attgctgaca aaaaaactaa 480
 agaaggtcgt gctatgaacc gtcgtgtatt cgcgacaadc actggtagcc gtac 534

<210> 2864
 <211> 336
 <212> DNA
 <213> Enterobacter cloacae

<400> 2864
 ccgacacttg ctgacgtaca ggaacagtac ttgccaaagcg ttttagcgcga agagtccgtc 60
 actccataca ttgcaatgct gaatggagag ccgattgggt atgccagtc gtacgttgct 120
 cttggaagcg gggacggatg gtgggaagaa gaaaccgac caggagtacg cggaatagac 180
 cagtcactgg cgaatgcac acaactgggc aaaggcttg gaaccaagct ggttcgagct 240
 ctggttgagt tgctgttcaa tgatcccag gtcaccaaga tccaaacgga cccgtcgccg 300
 agcaacttgc gagcgatccg atgctacgag aaagcg 336

<210> 2865
 <211> 527
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2865
 gtgaagcat gagggttatt cgggccatga atggaaagca agcgattgaa ttgcacgcta 60
 gccaacccat cgatttaadc ttacttgata ttaaattacc cgaattaac ggctgggaag 120
 tattaataa aatacgccaa aaagctcaga ctcccgtgat catgttgacg gcgctagatc 180
 aagatattga taaagttatg gcattacgca taggtgcaga tgactttgtg gtgaagcctt 240
 ttaacccaaa tgaagtcac gctagagttc aggcagtctt aagaagaact cagtttgcaa 300
 acaaagcaac taataagaat aaaatctata aaaatattga aattgatacc gacactcata 360
 gcgtttatat aactctgag aataagaaaa tcttgcttaa tctgacgctg actgaatata 420

aaattatttc attcatgatt gaccaacctc ataaagtttt tacgcgcgga gaacttatga 480
accactgcat gaatgatagc gatgcactag agcgaaccgt agatagc 527

<210> 2866
<211> 588
<212> DNA
<213> *Acinetobacter baumannii*

<400> 2866
tcagtgatt aagcattcaa ccgcaatcgg taaatttttag tgaaaatcctt cctgcacgtg 60
tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc 120
tatttaaaca aggtagtga gttagagcag ggcaagcctt atataaaatt aattccgaga 180
cttttgaggc cgatgtaa atagcaatagag cttctctcaa taaagctgaa gctgaggtgg 240
caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta 300
agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa 360
tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta 420
tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggg cagggcgata 480
ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg 540
ttagtgagta tgaacgccta caggctgcgc taaaagcgg cgaattat 588

<210> 2867
<211> 567
<212> DNA
<213> *Enterobacter cloacae*

<400> 2867
atcgtgacca acagcaacga ttccgtcaca ctgcgcctca tgactgagca tgaccttgcg 60
atgctctatg agtggctaaa tcgatctcat atcgtcaggt ggtggggcgg agaagaagca 120
cgcccgacac ttgctgacgt acaggaacag tacttgccaa gcgttttagc gcaagagtcc 180
gtcactccat acattgcaat gctgaatgga gagccgattg ggtatgccc gtcgtacggt 240
gctcttgaa gcggggacgg atggtgggaa gaagaaaccg atccaggagt acgcggaata 300
gaccagtcac tggcgaatgc atcacaactg ggcaaaggct tgggaaccaa gctggttoga 360
gctctggttg agttgctggt caatgatccc gaggtcacca agatccaaac ggacccgtcg 420
ccgagcaact tgcgagcgat ccgatgctac gagaaagcgg ggtttgagag gcaaggtacc 480
gtaaccaccc cagatgggtcc agccgtgtac atggttcaaa cacgccaggc attcagcgga 540

acacgcagtg atgcctaacc cttccat 567

<210> 2868
 <211> 588
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2868
 tcagtgatt aagcattcaa cgcgaatcgg taaattttag tgaaaatctt cctgcacgtg 60
 tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc 120
 tatttaaca aggtagttaa gttagagcag ggcaagcctt atataaaatt aattccgaga 180
 cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg 240
 caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta 300
 agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa 360
 tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgcta 420
 tttctgggcg tattgggcaa tcttttgta ctgaaggtgc attggtcggc cagggcgata 480
 ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg 540
 ttagtgagta tgaacgccta caggctcgcg taaaagcgg cgaattat 588

<210> 2869
 <211> 588
 <212> DNA
 <213> Acinetobacter baumannii

<400> 2869
 tcagtgatt aagcattcaa cgcgaatcgg taaattttag tgaaaatctt cctgcacgtg 60
 tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc 120
 tatttaaca aggtagttaa gttagagcag ggcaagcctt atataaaatt aattccgaga 180
 cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg 240
 caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta 300
 agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa 360
 tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgcta 420
 tttctgggcg tattgggcaa tcttttgta ctgaaggtgc attggtcggc cagggcgata 480
 ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg 540
 ttagtgagta tgaacgccta caggctcgcg taaaagcgg cgaattat 588

<210> 2870
 <211> 718
 <212> DNA
 <213> *Acinetobacter baumannii*

<400> 2870
 tgccaattaa cttcttagcc gaagcagcaa aaaaaattag tcacggcgac ctctctgcta 60
 gagcttacga taatagaatt cactccgccg aatgtcggg gcttttatat aattttaatg 120
 atatggctca aaagctagag gtttccgtca aaaaatgcca ggtttggat gcagccatcg 180
 cacatgagtt aagaacgcct ataacgatat tacaaggctg tttacaggga attattgatg 240
 gcgtttttta acctgatgaa gtctatttta aaagtctttt aatcaaatt gaaggtttat 300
 ctacttagt cgaagactta cggacttta gcttagtaga gaaccagcaa ctccggttaa 360
 attatgaatt gtttgacttt aaggcggtag ttgaaaagt tcttaaagca tttgaagatc 420
 gtttgatca agctaagcta gtaccagaac ttgacctaac gtccactcct gtatattgag 480
 accgccgtcg tattgagcaa gttttaattg ctttaattga taatgcgatt cgctattcaa 540
 atgcaggcaa acttaaaatc tcttcagaag tggttgcaga caactggata ttaaaaattg 600
 aggatgaagg ccccgccatt gcaaccgagt tccaagacga tttatttaag ctttcttta 660
 gattagaaga atcaaggaat aaagaatttg gcggcacagg tttaggtctt gctgttgt 718

<210> 2871
 <211> 673
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2871
 attcctgcag ttcagtggg cgcgggtgc gtctcgtctg tttgccccgg cgctggtgca 60
 accggtttcc gcctcgtctg gcataccgc cgcgaacgcc gccattgccg gcgccgccga 120
 tttcggcggc ctggagaaag ccagcgggtg cgcctgggc gtcaccgtgt tgaacaccgg 180
 caacggtcgt cgcatcggcg ggcatcggca ggatgagcgc ttccgatgt gcagcacggt 240
 caagtcgatg ctggtcggcc atgtgctgag cttgccgat gcaggccggc tttcgtcga 300
 caccgtgtg cccatcggcg ggaaggatct gctgtcctac gtcgggtg cgcccgcca 360
 cgtgggcaag gatctgaccg tgcgcgacct gtgccggggc acgctgacca ccagcgacaa 420
 cacggcggcc aacctgctgc tggaggtggt gggcggggcg tcggcgtga cggattcct 480
 gcgcgggcag ggcgacagca ttaccgcaa tgaccgcaac gagccggacg tgaatctggt 540

cgcgaagga gaccgcgcg ataccaccag cccggcccg atggccacca gcctggccc 600
 cttcgcggtg ggcaatggcc tgcagcctgc atcgcgccg cagttcgccg attggctcat 660
 cgacaaccag acc 673

<210> 2872
 <211> 584
 <212> DNA
 <213> Enterobacter cloacae

<400> 2872
 cagccacact actttacctt cggtaaagcc gatgttgcgg cgaacaaacc cgtcaccocg 60
 caaacctgt ttgagctggg ctctataagt aaaaccttca cggcgtact gggcggcgat 120
 gccattgccc ggggtgaaat agcgcctgggc gatccggtag caaaatactg gcctgagctc 180
 acgggcaagc agtggcaggg cattcgcgat ctggatctgg caacctatac cgcaggcggg 240
 ctgccgttac aggtgccgga tgaggtcacg gataccgcct ctctgctggg cttttatcaa 300
 aactggcagc cgcagtggaa gccgggcacc acgcgtcttt acgctaacgc cagcatcggg 360
 ctttttggtg cgctggcggg caaaccttcc ggcgatgagct atgagcaggc catgacgacg 420
 cgggtcttta aaccctcaa gctggaccat acctggatta acgtcccga agcgggaagag 480
 gcgcattacg cctggggata ccgtgagggg aaagcgggcc acgtttcgcc agggatgctg 540
 gacgcggaag cctatggcgt aaaaactaac gtgaaggata tggc 584

<210> 2873
 <211> 556
 <212> DNA
 <213> Enterobacter cloacae

<400> 2873
 cattagccag catgtgaaaa cgctggagca gcacctgaac tgtcagctgt tcgttcgcgt 60
 gtcgcgcggg ctgatgttga ctatcgaggg tgaaaattta ctgccggtgt tgaatgattc 120
 tttcgatcgt atagccgga tgctggatcg cttcgctaac catcgtgcgc aggagaagct 180
 gaaaatcggc gtggtgggta catttgccac cggggtttta ttctcgcagc tggaggattt 240
 tcgccgtggc tatccgcaca tcgatcttca gctttccacc cataacaacc gcgttgatcc 300
 ggctgccgaa gggcttgact atacgatccg ctacggtggc ggggcgtggc acggcaccga 360
 ggctgaattc ctttgcgatg cgcgcctcgc gccgctgtgt acgcccgata tcgccccag 420
 tctgcacagt ccggccgaca tcctcaggtt tacgctgctg cgctcttacc gacgcgatga 480

atggaccgcg tggatgcagg cggccggcga gcatccccct tcgccaacgc accgcgtgat 540
 ggtatttgat tcgtcc 556

<210> 2874
 <211> 597
 <212> DNA
 <213> *Enterobacter cloacae*

<400> 2874
 gcatctcttg ctctgctctc gccacgccag tgtcagaaaa acagctggcg gaggtggtag 60
 cgaatacggg taccocgctg atgaaagccc agtctgttcc aggcattggcg gtggccgcta 120
 tttatcaggg aaaaccgcac tattacacgt ttggcaaggc cgatatcgcg gcgaataaac 180
 ccgttacgcc tcagaccctg ttcgagctgg gttctataag taaaaccttc accggcgtgt 240
 taggtgggga tgccattgct cgcggtgaaa ttctcgtgga cgatccggtg accagatact 300
 ggccacagct gacgggcaag cagtggcagg gtattcgtat gctggatctc gccacctaca 360
 ccgctggcgg cctgccgcta caggtaaccg atgaggtcac ggataacgcc tcctgctgc 420
 gcttttatca aaactggcag ccgcagtgga agcctggcac aacgcgtctt tacgccaacg 480
 ccagcatcgg tctttttggt gcgctggcgg tcaaaccttc tggcatgccc tatgagcagg 540
 ccatgacgac gcgggtcctt aagccgctca agctggacca tacctggatt aacgtgc 597

<210> 2875
 <211> 596
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2875
 ccacctcatc agcaacatga aggtgcgagg cgtggcgccg caggacctgc ggctgatcct 60
 gctcagccac gcgcacgccc accatgcccg gccggtggcg gagctgaagc gccgtacggg 120
 cgccaaagta gcggccaacg ccgaatcggc ggtgctgctg gcgcgcggtg gcagcgacga 180
 tctgcacttc ggcgatggca tcacctaccg gcctgccagt gcagaccgca tcgtcatgga 240
 tggcgaaatg atcacggtgg gcggcatcgc gttcactgcg cacttcatgc cggggcacac 300
 cccgggcagc accgcgtgga cctggaccga taccocgag ggcaagcccg tgcgcatcgc 360
 ctacgccgac agcctgagtg caccgggcta ccagctgcag ggcaaccccc gttatccgca 420
 cctgatcagc gattacaggc acagcttagc gacggtgccc gcgctgccct gcgacgtgtt 480
 gctgacaccg catccgggtg ccagcaactg ggactacgct gccggcagca aggccagcgc 540

caaggcactg acctgcaagg cctacgcgga tgcggccgaa cagaagtctg acgcac 596

<210> 2876
 <211> 181
 <212> DNA
 <213> Enterobacter cloacae

<400> 2876
 aaaacggttc accataaaaa acatcacaaa gcggtctaac cagcggcaga acagaaagcg 60
 caggcccgga aaaagcacca taaaaaagcg gcaaaacctg cggtagagca gaaagcccag 120
 gcggtctaaa agcatcacaa aaaagcagca aaacacgaag cggctaaacc tgctgcacag 180
 c 181

<210> 2877
 <211> 310
 <212> DNA
 <213> Enterobacter cloacae

<400> 2877
 ttgccgatta tcagatcgtg accgatctga atgccgaatg cgatcgggcg atactccggg 60
 ttgacgttgc gctggaaggc tcacgctacg ccgaatgcga ggtggcgttt accctgtggc 120
 gtaatggcga agcctgcgcg caaaccacgc agcagcccgg atcggccatc gtggacgaac 180
 gcggcagttg ggctgaacgg cttacggtgg cgatacccggt gaacgctccc gcgctgtgga 240
 gcgctgaaac accggaatgc tatcggtcga caatgtcgtc tcgggatgcg cagggtaacg 300
 tgctggagac 310

<210> 2878
 <211> 260
 <212> DNA
 <213> Enterobacter cloacae

<400> 2878
 ggtctacacc acggatcaca ccgacgttgc cgcctggggc gacgtgctga cccgttttat 60
 cattgccgat aaccccactc tggcactgaa ggctgtcgat gccctgcgc attccgacgg 120
 tgctgatgca ggctcgggtg agaaagagtg gcgcgccatg accgatgtgc atcagttctt 180
 tagcttactg aagcgcata acctgagccg ccagcaggcg tttcgtctgg tgagtgaaga 240
 tctggcctgt aaagtgata 260

<210> 2879
 <211> 294

<212> DNA
 <213> *Enterobacter cloacae*

 <400> 2879
 ttctcgacga acccaattca gcgctggatc tctaccacca gcagcatctg ctgcgcctgt 60
 tgaaatcgct gaccgcgcag ggccatcttc acgcctgcgt ggtgctgcac gatctcaatc 120
 ttgccgcatt atggctggac cggatcctgc tgttacacaa cggcaggatt gtttctcagg 180
 gcataccgga gacggttttg caggccgacg cgctggcaca ctggtacggt gcgcagggtgc 240
 acgttgcat gacatccggc gcacgccga ccgcaggttt ttctcgcccc ttag 294

 <210> 2880
 <211> 153
 <212> DNA
 <213> *Enterobacter cloacae*

 <400> 2880
 cgtcggtttg tctttctgac ggccgaaggt gaggccctgc ttgagagcag taaaccgatt 60
 ggaaatgagg tggatgaggc gtttttaggg cgccttaacg gcgcggaacg agagcaatth 120
 tcagcgtca ttaaaaagat gatgcaggat taa 153

 <210> 2881
 <211> 353
 <212> DNA
 <213> *Enterobacter cloacae*

 <400> 2881
 gaccattac gaacaagaga tctctgacat tcacgtcgcc cttgaaaact ggtaggtgc 60
 aggcgaaggc gatcgggaca ccctgctcgc ccgtttccgt ccgattttc tgatggttcc 120
 accgagtggc aaccctttag atcatcacgc gcttgcccaa atttttatat tgcacagcgg 180
 ggaaccgca cccgggctca ggatcgacat tgatgcgttg acaacgctc agacatggga 240
 caacggcgcg gtgctccatt accgggagac gcaaaccgag ccaggccagc ccgtcaacgt 300
 gcgctggtca accgcagtgc ttaatcagga aggggataac atccacctgg cgt 353

 <210> 2882
 <211> 517
 <212> DNA
 <213> *Enterobacter cloacae*

 <400> 2882
 agtgggtgtg ctttcgtggg tcagcaatga cgcccagctg cgtcagcttt cactctgggg 60
 aatgggaagt cttggtcagg cacagtggtc aacgctgctc gccgtgacct cgctgatggt 120

gcctgccgtt ctggcgatct ggcgttggtc cagcgcatta aatttactgc aactgggtga 180
 agaggaagcg cattaacctg gcgtggacgt tgcctttgta cagcgaatat tactgttatg 240
 cagcgccttg ctggctcgtg cggctgtcgc cgtcagcggc gtgattggct ttgtcggact 300
 cgtggtgccc cacctgatgc gcatgtggct gggcggcggat caccgggcaa cctccccgg 360
 cacggtactc gctggcgtt tactgtcgtt ggtggcggat acggtcgcgc gcaccctggt 420
 cgctccggca gaaatgccgg tcggcctgct caccagtatc cttggtgctc cctggttctt 480
 atggctcatt tttcgtcgtg gagaacagca tggctga 517

<210> 2883
 <211> 627
 <212> DNA
 <213> Enterobacter cloacae

<400> 2883
 gcggagtctt ctctggttgc gcgcgacagt accagccagt ggccgcaggc gacaaacgcg 60
 ctgcctgacg tggggtatct tcgccagctg aatgcggagg ggattttgtc cgtacgcccg 120
 acgtggtgtc tggcaagcga ccaggcgcag ccctctctgg cgtgaaaca ggttgaacag 180
 agccacgtcc ggggtggttac cgttcccggc acgcctgacc tgcgcgcgat tgacgaaaaa 240
 gtacgggtga tagctcaggc gacgcatcat gaggcgcgaag gggaaacct gcgcaactcg 300
 ctgcgtcagg cgctggcggc actgccctca acaccgtcaa caagcgggtg ctgtttatcc 360
 tcagccacgg cggaatgacc gcaatgggcy gccgggcaac agaccggcgc ggatgcggca 420
 atacgcggc cggggttga gaacccatg cagggttta cccgctatca gccgctttcc 480
 aggagggggt gatggccagc cagccggatc tgggtggtgat ttcgaggac ggtcttaacg 540
 cgctgggcyg cgaagaaaat ctgtgaaac tgcccggcct ggcgcaaacg ccagcgggac 600
 gaagcaagca ggtgctggct attgatg 627

<210> 2884
 <211> 731
 <212> DNA
 <213> Enterobacter cloacae

<400> 2884
 catcaggata aacggcatag atgccctgct gagcgaacgt gtacgccggt aacagcgaga 60
 ccagttcccc tgcattcagt gcgtttcgca ccagccactc cggcagcagc gccactccac 120
 atcccgcgag ggcaaaagcc atcagcgcct gggcgtgctc tgcatacagg cgcggcgcctc 180

tcttgatctc aaaggaacc ggctgctcat caacacctct cacctgccag cgcagcggcg 240
 aggttaaacg ctcatgaatg atccagtcog cttccgccag ctgctccagc gagttaaccg 300
 gatggtttgc cagccagcct ggcgttgcca cgggcaggat ggtgaaggag gtcataacg 360
 cggcgtggta gcgcgaatct gcaagcgtgc cgagccggat agcgacatcg aagcgtcgg 420
 cgataagatc ggcatgcaaa gaggacgaga catgccgcac gcgaaggcc gggcgcagct 480
 ggctaaattc agccagcaaa ggcaccacca cctgcgagcc atattcgggc gtggtggtga 540
 tccgcagttc tcccgtcagc ccggcgtggg tggcgcgaac gtcatacctgc aatcgtctg 600
 catcccgtaa cagcatcacg cttcgttgat gaaagagctt cccgcctcg gtcagcgtca 660
 ggcgtcgggt ggttcgcagc aacaggggta cggccagctc ctcttcaagc tgacgaatat 720
 gaaagctgac c 731

<210> 2885
 <211> 353
 <212> DNA
 <213> *Enterobacter cloacae*

<400> 2885
 agcagtaacc cgatgaccga tcgttccacc attcagcgcg atgccagct tggctaccgc 60
 attgcgccag ccggaacga ctgggtgaac gccgatgcga aaatttactg gtccgaagcg 120
 cggatcaacg cccagaacat cgacgccagc ggcgagttcc gtaagcagac taccaaaggc 180
 ggcaaagtgg aaaaccgcac ccgcctgttc agcgactctt tcgcctcgca cctgctgacc 240
 tacggcgggg aatactatcg tcaggagcaa caccctggcg gcgcgaccac cggcttcccg 300
 gacgcgaaaa tcgacttcag ctccggctgg ttgcaggatg agatcactct gcg 353

<210> 2886
 <211> 461
 <212> DNA
 <213> *Enterobacter cloacae*

<400> 2886
 gccattgtca cctttgcttt ggcctgcgcg tggcttaaaa cagaaccgtc gccgataaac 60
 accaccagga cagtaaacct gtctttgctg acggatccgc tgttgcgctt atccatgctt 120
 atctatgtgt gcgtaccgg catttttata ggcgtgaacg taacgggcat gtattacctc 180
 cagagcgagg ccaatatgac acccgcgca acgggcatgc ttatgctgcc gtggtctgtg 240
 gcttcgtttg tggctatcac cgcgacagga cgctatttca accgtatcgg cccccggcg 300

ctggtggtca tcggttgcc tttgcaggcg acgggcatte tgcttttagt taacgtcggc 360
 ccggcaatgc tgctacctgc cgttgcgttt gcgctgatgg gcgcgggggg aagcctttgc 420
 agcagtacgg ctcagagcag cgcgtttttg acgatgcgac c 461

<210> 2887
 <211> 401
 <212> DNA
 <213> *Enterococcus faecium*

<400> 2887
 ttggcaatgc gatgtaggt aatatcatcg ttgtcagcgg ctcatTTTTG atactactgg 60
 ctctcttgaa gcactttgct tggggaccaa tcagcgatat ttgaaaaaa cgtgaagaca 120
 agatcgccaa tgatttagat tctgcagAAC aatctcgcat caactcagcg aaaatggaac 180
 aagaacgcga acaacaattg ttagcctctc gttctgatgc agctgatatc atcaaaaatg 240
 cgaaagaaag tggagaatta agccgcaaaa atattttgaa ggatgctcaa gaagaagcag 300
 ctcgtctaaa aagcaaagcc caagctgata tcaactgtaga acgtgattca gcgctgaact 360
 ctgtaaaaga cgacgttgca gaactctctc ttcaaatcgc g 401

<210> 2888
 <211> 787
 <212> DNA
 <213> *Acinetobacter baumannii*

<400> 2888
 cggcatcgtc aacataacct cggacagttt ctccgatgga ggccggtatc tggcgccaga 60
 cgcagccatt gcgcagggcg gtaagctgat ggccgagggg gcagatgtga tcgacctcgg 120
 tccggcatcc agcaatcccg acgccgcgcc tgtttcgtcc gacacagaaa tcgcgcgat 180
 cgcgccggtg ctggacgcgc tcaaggcaga tggcattccc gtctcgctcg acagttatca 240
 acccgcgacg caagcctatg cttgtcgcg tgggtgtggc tatctcaatg atattcgcgg 300
 ttttccagac gctgcgttct atccgcaatt ggcgaaatca tctgccaac tcgtcgttat 360
 gcattcggtg caagacgggc aggcagatcg gcgcgaggca cccgctggcg acatcatgga 420
 tcacattgcg gcgttctttg acgcgcgcat cgcggcgctg acgggtgccg gtatcaaacg 480
 caaccgcctt gtccttgatc ccggcatggg gttttttctg ggggctgctc ccgaaacctc 540
 gctctcggtg ctggcgcggg tcgatgaatt gcggctgcgc ttcgatttgc cgggtccttct 600
 gtctgtttcg cgaaaatcct ttctgcgcgc gctcacagge cgtggtcccg gggatgtcgg 660

ggccgcgaca ctcgctgcag agcttgccgc cgccgcaggt ggagctgact tcatccgcac 720
 acacgagccg cgccccttgc gcgacgggct ggcggtattg gcggcgtga aagaaaccgc 780
 aagaatt 787

<210> 2889
 <211> 632
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2889
 tgcagaacga gaaggatgcg gtggactcgg tgttctccgt gcagggcttc agcttcgccg 60
 gcatgggcca gaacgcgggc atggcgttcg tcaagctgaa ggactggagc gagcgtgacg 120
 ccgacaatgg cgtgatgccg atcaccggac gtgcgatggc ggccctgggc cagatcaagg 180
 atgccttcat cttgccttc ccgccgccg ccatccgga gctggggacc gcctcgggct 240
 acaccttctt cctgaaggac aacagcggcc agggccacga ggactggtg gccgcgcgca 300
 accagctgct cggcctggcc gcaggcagca agaagctggc caacgtacgc ccgaacggcc 360
 aggaagacac gccgcagttc cgcacgcaca tcgacgcggc caaggcgacc tcgctgggac 420
 tgtcgatcga ccagatcaac ggcacgctgg cggccgcgtg gggcagctcg tacatcgatg 480
 acttcgtoga tcgtggccgc gtcaagcgcg tgttcgtgca ggccgaccag gcgttccgca 540
 tggtgccgga ggacttcgat ctctggtccg tgaagaacga caagggtgag atggtgccgt 600
 tcagcgcctt cgctaccaag cactgggact ac 632

<210> 2890
 <211> 526
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2890
 aggaacgtac gctggaatcg atcgcggcac tggaaaacca cttcctgcag aacgagaagg 60
 atgcagtgga ctcggtgttc tcggtgcagg gcttcagctt cgccggcatg ggccagaacg 120
 ccggcatggc gttcgtcaag ctgaaggact ggagcgcgagc tgacgccaac aatggcgtga 180
 tgccgatcac cggacgcgcg atggcggccc tgggcccagat caaggatgcc ttcatcttcg 240
 ccttcccgcc gccggccatc ccggaactgg gcaccgcctc gggctatacc ttcttcctga 300
 aggacaacag cggccagggc cacgaggcac tggtgggccgc gcgcaaccag ctgctcggcc 360
 tcgccgccg cagcaagaag ctggccaacg tgcgccgaa cggccaggag gacacgccgc 420

agttccgcat cgacatcgac gcgccaagg cgacctcgct ggggctgtcg atcgaccaga 480
 tcaacggcac gctggccgcc gcgtggggca gctcgtacat cgacga 526

<210> 2891
 <211> 473
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2891
 caagaagcag aaccttcgca tcaatgtgct tgccgcccgc gtgctgtcga tgaccgcggt 60
 ggggtgccgtc cacgcccgtg gactgccgac ccgcgaaccg gtgcgccagg ccagtgtctgc 120
 ccagccgggc accgaccgca tcatcgtcaa gtatcgtgcc ggtagcgtg cagccggtga 180
 ccgttcggcc aagctgtcca ccgtgcagtc ggcgctgacc cgcgccagcc tggccggcgg 240
 taccgcgcgc gccagtacgc tgggcccgca ggtggtacgc cggctgggcg tgggcgcgga 300
 tgtgatccgc ctgcagggcc gcctggcacc ggccgaactg cagcgcgtgc tgaaggaact 360
 gaaggccgac cctgcggtgc agtacccga ggccgacgtg aagctgcgcc gcagcgaact 420
 gcgcgccggt gacgtgcagc ctgcgctggc gccgaatgat ccgtactacc agc 473

<210> 2892
 <211> 403
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2892
 cagcatcctg atggaagacg gcagcacctt cgagcacaag ggcacgctgg agttctctga 60
 agtgagcgtc gatccagcca ccggcagctt cggcctgcgc gtgaagggtg acaaccgga 120
 cggcctgctg atgccgggca cctacgtgcg cgcggtgatc ggcggcggcg tgcgcagcga 180
 tgcggtgctg gtaccgatgc agggcatcgc ccgcgatccg aagggcgaca ccaccgcgat 240
 ggtggtcggc aaggacaaca aggtcgaagt gcgcccggtc aaggtcagcc gcacggtcgg 300
 cgacaagtgg ctggtcgagg acggtctgaa ggccggcgac aaggtcatcg tcgaaggcct 360
 gcagaagatc ggccccggca tgccggtcaa ggccaccgag aag 403

<210> 2893
 <211> 476
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2893

ctcatcgcca ctttcgacac caccagggc ccatcaagg tcgagctggt cgccgacaag 60
 gcgccgctga ccgtggccaa cttcgtgaac ctggtcaagc acggtttcta tgacggcctg 120
 atcttccacc gcgtgatcgc cgacttcatg atccagggcg gctgcccgca gggtcgtggc 180
 accggcggcc cgggctacaa gttcgaagac gagaagaatg gcgtgaagca cgaggtcggc 240
 tcgctgtcga tggccaacgc cggcccgaac accaacggca gccagttctt catcaccac 300
 atcaagaccg actggctgga cggccgccac accgtcttcg gcaaggtcct ggaaggccag 360
 gccatcgctg attcggtcaa gcagggcgac gtgatccatt cgatcacctt ggaaggcgac 420
 gtcgacgccg tgctggccgc ccaggccgag cgcgtcgcgg agtggaaaca gcacct 476

<210> 2894
 <211> 380
 <212> DNA
 <213> Stenotrophomonas maltophilia

<400> 2894
 tccagattgt cggagacatc gatgggatga ctgcgcagga tcgcgcgctc accgcccgc 60
 accgcgcgca ccagcagcca gatgaagcat gcggtcagcg cgatgtgcag cacatgctgc 120
 aggttgccca gcaccggatc ctgcagcggc gtggcctgca atgcggggat caacaacagc 180
 agcggccatg cggtgggccag cggcaaccog agcacacgtc cgatgcgtgc gcgccggcga 240
 tcacgccctt tcagtcgatg gtagatccac aggatcaacc acgcgccgat gccgcccact 300
 acaacggcca atcccaacgg ccatgcgtag gcctgtgcgc tttgccagtg caccgttgcc 360
 acctccactc gaacagcagg 380

<210> 2895
 <211> 281
 <212> DNA
 <213> Stenotrophomonas maltophilia

<400> 2895
 gacaccgctg ctgaagtacc gcggcatgcc gccactgatc gaacaggccg ccaccgagct 60
 gcgcccgccc ggcgccgtgg tggtaccggt ggagctgccc aaccagggcg cctgggcccga 120
 gccgaacgc acgtgctgctc tgtacgaatt caaggccggg ctggagcgtc acttcaacac 180
 ccaccgagcg ccaactgcgca gcctggcccga cctgatcgcc ttcaaccagg cgcacagcaa 240
 acaggaactg ggcctgttcg gccaggaact gctggtggaa g 281

<210> 2896

<211> 286
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

 <400> 2896
 ctgaagtccc caccattcct ccggtcatca acgttgacgc cgagctggat cactggcgcc 60
 gccaacatgc cgaaggcgca ctgccgcaca actcgttcgg ctcgtaactg ccgtggatca 120
 agtttgcctg cgattcgtg atcaccacgc cgcgcgccag cgaggccgaa cgtgacgaga 180
 tgttccagac ccagtacgcc ctgcagatca tgccgcgact gagtgaagcc caggcccgcg 240
 aattcgtcga ccgttgctgg cagcacgtct accagagcag tccggt 286

<210> 2897
 <211> 629
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

 <400> 2897
 cgtcaccgag aagaagagcg gccccgccct ggccagcaca cccggctcac ggggtggcagc 60
 ggtcatgctc cgcaatgctg cattggccga ggactatgct cggcgccacg cgattccgctg 120
 ctggtacgcc gacgccgacg cactcatctc cgatcccga gtgaacgcgg tctacgtctc 180
 aacgccgccc tcgacgcaca tgcagtacgc gctgcaggcg atcgccgctg gcaagccggt 240
 ctacatcgaa aagccgatgg ccatggacca cgacgagtgc cagcgatca tcgcgccag 300
 cgcccgcagc ggcgtgccc ttttcgtggc ctactaccgc cgtgccctgc cccgcttcgc 360
 acaggtgaag cagctgctgg acaacggcgc gatcggaacg ccgcgacagc tgcgcccac 420
 cctgcatcgg ccgattcgg cgaatgccgc atcgcccac ttctggcgga ccaatccgtc 480
 gatcgccggc ggcgggctgt tcgtcgatct gggctcgcac accctggacc tgctcgacca 540
 tctgctgggg ccgctgagcg acgtgctgg cctggccagt tcgctgaccg gcgcctacgc 600
 cgccgaggac agtgtctcga tgtgcttcc 629

<210> 2898
 <211> 345
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

 <400> 2898
 ggtgatgatc cactccttca tcgagctgtc cgaagacgag cgcctgcgca agaccatgga 60
 gatcatgctg cgcagcgatg cctcggccga caccaggggt ctgaccgaaa tgcagcaggc 120
 cggattccgc gatgcgctgg accggatgga gcgtgccctg cgccgcgccc gcgatctggg 180

ccagctgcgc gaaggcgccg accccaagat cgccgcgcgc atgctgcatg ccaccgtgct 240
 gggcgctgctg cacggggcga tggtcgaacc ggacctgatg gacctcaagc gcgacggcat 300
 gctcgcactg gacatgaccc tggccgccta cgtgaaggac ggcgt 345

<210> 2899
 <211> 153
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2899
 accgcatggc tgacctacgg tgccgatgcg cagcggctga agatcgccga tgccacgctg 60
 aagacctacg aggattcgtc gcgcctggcc gaggcccgcc acgaacgtgg tggcagttcg 120
 gcgctggagc tgaccagac ccgtaccctg gtc 153

<210> 2900
 <211> 212
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2900
 atgtcccagg taacgcaacc gcgtgtgctg cgagtgtggg tggtccttgg tgcgtccggt 60
 ctgtcatcgc tgctgctggc cagcctgctg ctggccggtg acgtccactc agcgggctg 120
 cagtccgcgc cgacgcacca gcgcttcacg gtgaagtacc gcgacggtag tgcgccggtg 180
 gccaacacca ccgcaactggc ctcttcgctg aa 212

<210> 2901
 <211> 150
 <212> DNA
 <213> *Stenotrophomonas maltophilia*

<400> 2901
 gtctcgacca aggtacgggt ctgggtcagc tccagcgcg aactgccgcc gcgttcgtgg 60
 cgggcctcgg ccaagcgcag cgaatcctcg taggtcttca gcgtggcacc ggcgatcttc 120
 agccgctgcg catcagcccc ataggtcagc 150

<210> 2902
 <211> 534
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 2902
 gctggtaaag ctgaagaaac aacacaacca gttgcacaac cattagttaa aattccacag 60

ggcacaatta caggtgaaat tgtgaaaggt ccggaatata caacgatgga aaataaaacg 120
 ttacaagggtg aaatcgttca aggtccagat ttccaacaa tggaacaaag cggccatct 180
 ttaagcgaca attatactca accgacgaca ccgaacccta ttttagaagg tcttgaagg 240
 agctcatcta aacttgaat aaaaccacaa ggtactgaat caacgttgaa aggtattcaa 300
 ggagaatcaa gtgatattga agttaaacct caagcaactg aaacaacaga agcttctcaa 360
 tatggtccga gaccgcaatt taacaaaaca cctaagtatg tgaaatatag agatgctggt 420
 acaggtattc gtgaatacaa cgatggaaca tttggatag aagcgagacc aagattcaac 480
 aagccatcag aaacaaacgc atacaacgta acgacaaatc aagatggcac agta 534

<210> 2903

<211> 505

<212> DNA

<213> *Staphylococcus aureus*

<400> 2903

acaagagaag cagtagcaaa cgctgacgaa tcttgaaaa ctaaaactgt aaaaaaac 60
 ggtgaatctg aaacaaatc tcctgttgta aaagaagaga acaaagttga agaccctcaa 120
 tcacctaaat ttgataacca acaagagggt aaaactacgg ctggtaaagc tgaagaaaca 180
 acacaaccag ttgcacaacc attagttaa attccacagg gcacaattac aggtgaaatt 240
 gtgaaaggtc cggaatatcc aacgatgga aataaaacgt tacaaggatg aatcgttcaa 300
 ggtccagatt tccaacaat ggaacaaagc ggtccatctt taagcgacaa ttatactcaa 360
 ccgacgacac cgaaccctat tttagaagggt cttgaaggta gctcatctaa acttgaata 420
 aaaccacaag gtactgaatc aacgttgaaa ggtattcaag gagaatcaag tgatattgaa 480
 gttaaactc aagcaactga acaa 505

<210> 2904

<211> 523

<212> DNA

<213> *Streptococcus dysgalactiae*

<400> 2904

gacattgaga ttggtgatga ggatcgccga gggcttgaat tggcagcaga tattcgacaa 60
 aaagaccca atgcggtcat tgtgtttggt accacacatt ctgaatttgc tcctatttct 120
 tttaaataca aagtgtctgc cttagatattt attgacaaag cagttgataa acaacaattt 180
 agggatcaga ttgaagaatg tatccgctat acctatgaga tgatgtctag ccgagaatca 240

gaagacatgt ttctatttga gaccctcag acaaggtaa aattaccta caaagatc 300
 ctttattttg ctactgctac gacacccac aagggtgtgt tgtggactca gacggagaga 360
 ctggagtttt atggaatatt atctgagata caagctgtgg ctcaaagct tttcttatgc 420
 catagatcct acttgggttaa tctagataag gttgtgctga ttgataaatc caaacagctc 480
 ctctatttcg ataatgggga ttctgtatg gtctcacgct taa 523

<210> 2905
 <211> 287
 <212> DNA
 <213> Streptococcus dysgalactiae

<400> 2905
 tgtaaagt aaaatcttag atggtacttt aggcattgat ttcaagtcga tttcaaaagg 60
 tgaaaagaag gtgatgattg cagcatataa gcaaatTTTT tacaccgat cagcaaacct 120
 tctaataat cctgcggatg tgtttgataa atcagtgacc tttaaagagt tgcaacgaaa 180
 aggtgtcagc aatgaagccc cgccactcct tgtgagtaac gtagcttatg gtcgaactgt 240
 ttttgtcaaa ctagaacaaa gttctaaaag taatgatgtt gaagcgg 287

<210> 2906
 <211> 500
 <212> DNA
 <213> Staphylococcus hominis

<400> 2906
 atcgtgcttt cagttcattt cctgtcatcc atttatgatt tttaatgatt ttaccattct 60
 ctttgattt gtaatcaact acgtaaacag tcgtcttttt cacgttatct atattggctg 120
 tagcaccttt cataccagac atatgacttg cttctaattt aacagtatcg cccttactaa 180
 atccatcttt aggtgcatct ttaatctcct cgtttacgac ccatttatga ttgcttactt 240
 tttcatttcc atttgtgggt ttataactta caacataagc atatgtttta tacgcacctt 300
 ttacagtage ttctgcacct ttcatacctg gcatatgcc tgctgtaate gttactttat 360
 ctctacttt aaattcacc ccttagctcg atgtcatatc ttcaggaact ttactttcat 420
 cattatgctt catatggctc tcactttttt ggctcattagt gtctttatct ttttcatcat 480
 tattggagca agctgataat 500

<210> 2907
 <211> 610

<212> DNA
 <213> *Acinetobacter baumannii*

 <400> 2907
 gcaggtgatt tatttgcttc aaaccgatta ggtgaatcctt ttgcattgat tgatacaaac 60
 caagtgcctg atgttctggt cagatacgaa aacagtttaa ttggccgcag taataaaaaa 120
 ggccatattt ttgtgccatc ggtgacgcct tactattcgg gtaaatacag cgtcgacca 180
 atcgatttac cttcaaactt cactatcacg caagttgaac aacgtattgc tgctaaacgt 240
 ggctcgggtg ttgtgattaa gttcccagtt catcagtcta tttccgcaa tgtctatttg 300
 actcaggcag atggcaaacc tgtgccggtg ggggctgtag tacatagagc tgatcaagag 360
 tcttctatg tgggaatgga tggcattgtc tatttagaaa atttaaaacc gaataacacc 420
 gtaacggttc agcgttcgga ccaaagtatt tgtaaagcag attttctgt agatgtagaa 480
 caagccaagc agcagattgt ggtggttaa cctgttactt gtcacgaggt atctttgcca 540
 tgaatataaa aacaaaaaaaa ttactcagac atttatgcat gttctctgga ctgatgttga 600
 cgggaaatat 610

<210> 2908
 <211> 516
 <212> DNA
 <213> *Acinetobacter baumannii*

 <400> 2908
 acggtatcga aagctgaaat gcagcactcc attctttttc gatgaaatca cggttggcac 60
 ttaatgaaac agtcacacca ttcatataag tcggtaaaac aggcgcccaa gacaaattta 120
 agaagcgatt tttaaagtca tttgccttgg tattgatata accgacgcca aaagttccag 180
 agtttttggc cgcaaaataa gtattggccg ttaagctttt attgctattt actgaaatta 240
 aattgctata ttgcagccgt gaaaggtcgg tatattcatc atcacgttgg ttatggttaa 300
 tgctaaaacc aaaccgatta cggttatagc tgtatccaac tgtatattgg ttaccttcca 360
 agtctttcgt tcgatcttca gacatagatt tgtcggcttt actttgggta aaagaggcac 420
 tcagcacacc taaatttgca agcttgagta cagaccagc acccaataac tgtaaatctg 480
 aagaaagctc ggtgcgtcct tctacagtca gccagt 516

<210> 2909
 <211> 18
 <212> DNA
 <213> synthetic construct

<400> 2909
ccacactggg actgagac 18

<210> 2910
<211> 19
<212> DNA
<213> synthetic construct

<400> 2910
gctcgggacc tacgtatta 19

<210> 2911
<211> 25
<212> DNA
<213> synthetic construct

<400> 2911
ggtaccaagt atgatatgga tatgg 25

<210> 2912
<211> 20
<212> DNA
<213> synthetic construct

<400> 2912
ctgaattttg gagcaaaacc 20

<210> 2913
<211> 20
<212> DNA
<213> synthetic construct

<400> 2913
cttatcgaaa cgcttacgtc 20

<210> 2914
<211> 20
<212> DNA
<213> synthetic construct

<400> 2914
ataaagtcac taggccggta 20

<210> 2915
<211> 21
<212> DNA
<213> synthetic construct

<400> 2915

cacagcaaca aactactcaa a 21

<210> 2916
<211> 20
<212> DNA
<213> synthetic construct

<400> 2916
gctgcttggc ctgaaagtaa 20

<210> 2917
<211> 20
<212> DNA
<213> synthetic construct

<400> 2917
tgagtattcc caaaattgct 20

<210> 2918
<211> 19
<212> DNA
<213> synthetic construct

<400> 2918
gcatgagttg ttcaagtgg 19

<210> 2919
<211> 20
<212> DNA
<213> synthetic construct

<400> 2919
gcacattggg ataatgagac 20

<210> 2920
<211> 20
<212> DNA
<213> synthetic construct

<400> 2920
tgaacatagt ttgcaccaag 20

<210> 2921
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<400> 2921
tgtatctcga tttggttg 20

<210> 2922
<211> 19
<212> DNA
<213> synthetic construct

<400> 2922
caaactgccca agatgtgtc 19

<210> 2923
<211> 21
<212> DNA
<213> synthetic construct

<400> 2923
tcacttgтта cacctgtgat g 21

<210> 2924
<211> 20
<212> DNA
<213> synthetic construct

<400> 2924
ttgттgatta ttgcgaactg 20

<210> 2925
<211> 20
<212> DNA
<213> synthetic construct

<400> 2925
attgatcgaa atcaccaaaa 20

<210> 2926
<211> 20
<212> DNA
<213> synthetic construct

<400> 2926
ccatgagtct ttacccaaaa 20

<210> 2927
<211> 20
<212> DNA
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<400> 2927
gcactggттg aaactgaact 20

<210> 2928

<211> 22
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<400> 2928
atactttggc ccatacttct ac 22

<210> 2929
<211> 27
<212> DNA
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<400> 2929
gctatctggt agtcaattta tatatgc 27

<210> 2930
<211> 18
<212> DNA
<213> synthetic construct

<400> 2930
ataaattccg gccgtatg 18

<210> 2931
<211> 24
<212> DNA
<213> synthetic construct

<400> 2931
atatgaaaa cattcagaaa tcac 24

<210> 2932
<211> 23
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<213> synthetic construct

<400> 2932
agagtatctt tataatcgcc ttg 23

<210> 2933
<211> 20
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<213> synthetic construct

<400> 2933
tttaaattgga gggaagatga 20

<210> 2934
<211> 18
<212> DNA

<213> synthetic construct

<400> 2934

catcatgggt tgcttgac

18

<210> 2935

<211> 19

<212> DNA

<213> synthetic construct

<400> 2935

gcttccttac gttcctctg

19

<210> 2936

<211> 20

<212> DNA

<213> synthetic construct

<400> 2936

ttggtttgca gttgatattg

20

<210> 2937

<211> 19

<212> DNA

<213> synthetic construct

<400> 2937

taggtaatgc tgggtttgg

19

<210> 2938

<211> 18

<212> DNA

<213> synthetic construct

<400> 2938

gacggttcat agcacgac

18

<210> 2939

<211> 20

<212> DNA

<213> synthetic construct

<400> 2939

tcgtgtgta ttgcttgatg

20

<210> 2940

<211> 21

<212> DNA

<213> synthetic construct

<400> 2940
ctgcaaatag gtgaagttga g 21

<210> 2941
<211> 20
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<213> synthetic construct

<400> 2941
atgcctatatt ccaatcaaga 20

<210> 2942
<211> 18
<212> DNA
<213> synthetic construct

<400> 2942
gcaatgcttc ctgacatt 18

<210> 2943
<211> 20
<212> DNA
<213> synthetic construct

<400> 2943
agatggatgt tgatgctctt 20

<210> 2944
<211> 24
<212> DNA
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<400> 2944
gagttcaagt actcagcttc ataa 24

<210> 2945
<211> 19
<212> DNA
<213> synthetic construct

<400> 2945
gatgaatacc gccattac 19

<210> 2946
<211> 21
<212> DNA
<213> synthetic construct

<400> 2946
aaactcacga atgacactac c 21

<210> 2947
<211> 22
<212> DNA
<213> synthetic construct

<400> 2947
tttaaagttc ctacggctaa ac 22

<210> 2948
<211> 18
<212> DNA
<213> synthetic construct

<400> 2948
gcgcttgcaa actaactg 18

<210> 2949
<211> 18
<212> DNA
<213> synthetic construct

<400> 2949
ttaaactgtct tgccgatg 18

<210> 2950
<211> 20
<212> DNA
<213> synthetic construct

<400> 2950
taaactgatag tcacgctctg 20

<210> 2951
<211> 19
<212> DNA
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<400> 2951
cgacgcttta tctcttctg 19

<210> 2952
<211> 20
<212> DNA
<213> synthetic construct

<400> 2952
gtacggctac cagtgattgt 20

<210> 2953
<211> 18
<212> DNA
<213> synthetic construct

<400> 2953
ccgacacttg ctgacgta 18

<210> 2954
<211> 18
<212> DNA
<213> synthetic construct

<400> 2954
cgctttctcg tagcatcg 18

<210> 2955
<211> 21
<212> DNA
<213> synthetic construct

<400> 2955
gtgaaggcat gagtgttatt c 21

<210> 2956
<211> 19
<212> DNA
<213> synthetic construct

<400> 2956
gctatctacg gttegctct 19

<210> 2957
<211> 22
<212> DNA
<213> synthetic construct

<400> 2957
tcagtgatt aagcattcaa cc 22

<210> 2958
<211> 19
<212> DNA
<213> synthetic construct

<400> 2958
ataattcgcc gctttgtag 19

<210> 2959
<211> 18

<212> DNA
<213> synthetic construct

<400> 2959
atcgtgacca acagcaac 18

<210> 2960
<211> 18
<212> DNA
<213> synthetic construct

<400> 2960
atggaagggt taggcatc 18

<210> 2961
<211> 22
<212> DNA
<213> synthetic construct

<400> 2961
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(74) Agent: **HELBING, Jörg**; P.O. Box 10 22 41, 50462 Köln (DE).

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(54) Title: ANALYTICAL DEVICE FOR RAPID IDENTIFICATION OF PATHOGENS

(57) Abstract: DNA microarray for rapid identification of candida albicans in blood cultures.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

A. CLASSIFICATION OF SUBJECT MATTER INV. C12Q1/68				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) C12Q				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, EMBASE, MEDLINE, PAJ, WPI Data, Sequence Search				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	NAKAMURA M ET AL: "DEVELOPMENT OF THE DNA MICRO ARRAY FOR IDENTIFICATION OF INFECTIOUS DISEASE CAUSACTIVE BACTERIA IN HUMAN" 18 May 2003 (2003-05-18), ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, THE SOCIETY, WASHINGTON, DC, US, PAGE(S) ABSTRNOC219 , XP008047725 ISSN: 1060-2011 abstract ----- -/--	1-8, 10-25		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.				
<input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents :				
<table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none; vertical-align: top;"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed </td> <td style="width:50%; border: none; vertical-align: top;"> *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family </td> </tr> </table>			*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family			
Date of the actual completion of the international search <p align="center">5 July 2007</p>		Date of mailing of the international search report <p align="center">26/07/2007</p>		
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <p align="center">Helliot, Bertrand</p>		

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WANG R-F ET AL: "DNA microarray analysis of predominant human intestinal bacteria in fecal samples" August 2004 (2004-08), MOLECULAR AND CELLULAR PROBES, ACADEMIC PRESS, LONDON, GB, PAGE(S) 223-234 , XP004522575 ISSN: 0890-8508 abstract; tables 1,2</p>	1-8, 10-25
A	<p>LEHNER A ET AL: "Oligonucleotide microarray for identification of Enterococcus species" 1 May 2005 (2005-05-01), FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, PAGE(S) 133-142 , XP004876200 ISSN: 0378-1097 abstract</p>	1-8, 10-25
X	<p>EP 1 310 569 A (PRESIDENT OF GIFU UNIVERSITY) 14 May 2003 (2003-05-14)</p> <p>claim 14</p>	1-6, 10-13, 15,19-25
X	<p>WO 92/07096 A (MICROPROBE CORPORATION) 30 April 1992 (1992-04-30) page 12, paragraph 2 page 27, paragraph 2 example 6</p>	1-6,10, 12,13
X	<p>US 6 747 137 B1 (WEINSTOCK KEITH G [US] ET AL) 8 June 2004 (2004-06-08)</p> <p>column 2, lines 41-47 column 16, lines 55-60 column 19, lines 43-61 column 42, lines 5-43 table 2 claim 7</p>	1-6,10, 12,13, 19-25
X	<p>EP 1 344 833 A (CHIP BIOTECHNOLOGY INC DR [TW]) 17 September 2003 (2003-09-17)</p>	1-6, 10-13, 15,16, 18-25
Y	<p>page 2, paragraphs 8,10 page 3, paragraphs 13,18,19 examples 1,2 claim 8</p>	7,14,17
Y	<p>US 6 008 341 A1 (FOSTER TIMOTHY JAMES [IE] ET AL) 28 December 1999 (1999-12-28) figure 2</p>	7,14,17
	-/--	

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094868 A (CHIRON SPA [IT]; MASIGNANI VEGA [IT]; MORA MARIROSA [IT]; SCARSELLI MA) 28 November 2002 (2002-11-28) page 2, lines 12,13 page 2, lines 20-25 sequences 1992,3983 -----	1-8, 10-15

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2006/010132

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-4 (totally), 5-8, 10-18 (partially), 19-25

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-7 and 10-25 (partially)

An analytical device for direct identification and characterisation of microorganisms in a sample or clinical specimen, wherein the device comprises species specific gene probes of at least 100 nucleotides, and in particular a device for Staphylococcus species identification, in particular for S. aureus identification, wherein, in this case, the microarray comprises the gene probe listed as SEQ ID N° 3 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.

A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 2-176: claims 1-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus aureus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° SEQ ID N° 1-2, 4-141, 790, 798, 801, 802, 808, 812, 814, 818, 825, 827, 837, 840, 843, 844, 846, 848-852, 854, 855, 859, 862, 875, 885, 896, 897, 904, 907, 908, 935, 942, 2902, 2903, and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.

A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 177-220: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of E. coli in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 142-173, 815, 833, 834, 836, 839, 857, 860, 886-887, 895, 901, 906, and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of E. coli in a sample or in a clinical specimen.

Inventions 221-258: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Staphylococcus epidermis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 174-208, 786, 806, 826 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus epidermis* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus epidermis* in a sample or clinical specimen.

Inventions 259-269: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus haemolyticus* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 209-215, 796, 803, 820, 938 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus haemolyticus* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus haemolyticus* in a sample or clinical specimen.

Inventions 270-276: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus lugdunensis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 216-221, 888 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus lugdunensis* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus lugdunensis* in a sample or clinical specimen.

Inventions 277-284: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Staphylococcus warneri* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 224-230, 831 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus warneri* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus warneri* in a sample or clinical specimen.

Inventions 285-286: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus saprophyticus* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 222-223 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus saprophyticus* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus saprophyticus* in a sample or clinical specimen.

Inventions 287-375: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus pneumoniae* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 523-605, 793, 805, 807, 813, 858, 929 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus pneumoniae* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus pneumoniae* in a sample or clinical specimen.

Inventions 376-420: claims 1-4, 6, 11-12, 14-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Streptococcus pyogenes* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 645-686, 800, 856, 928 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus pyogenes* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus pyogenes* in a sample or clinical specimen.

Inventions 421-477: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Klebsiella pneumoniae* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 399-448, 792, 794, 829, 899, 902, 903, 934 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Klebsiella pneumoniae* in a sample or in a clinical specimen.

A kit for the detection of *Klebsiella pneumoniae* in a sample or clinical specimen.

Inventions 478-504: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Klebsiella oxytoca* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 449-469, 789, 799, 816, 822, 898, 943 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Klebsiella oxytoca* in a sample or in a clinical specimen.

A kit for the detection of *Klebsiella oxytoca* in a sample or clinical specimen.

Inventions 505-571: claims 1-4, 6, 11-12, 13-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Pseudomonas aeruginosa* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 470-522, 785, 787, 791, 797, 804, 821, 832, 838, 841, 842, 884, 889, 905, 926 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Pseudomonas aeruginosa* in a sample or in a clinical specimen.

A kit for the detection of *Pseudomonas aeruginosa* in a sample or clinical specimen.

Inventions 572-611: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus agalactiae* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 606-644, 930 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus agalactiae* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus agalactiae* in a sample or clinical specimen.

Invention 612: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus mutans* in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 894 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus mutans* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus mutans* in a sample or clinical specimen.

Inventions 613-633: claims 1-4, 6, 8, 10-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Enterococcus faecalis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 308-398, 809, 811, 835, 864, 865, 880, 891, 909, 933, 936 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Enterococcus faecalis* in a sample or in a clinical specimen.

A kit for the detection of *Enterococcus faecalis* in a sample or clinical specimen.

Inventions 634-659: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and characterisation of *Enterococcus faecium* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 810, 817, 824, 847, 853, 861, 866-874, 876-879, 882, 900, 927, 931, 932, 939, 2887 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Enterococcus faecium* in a sample or in a clinical specimen.

A kit for the detection of *Enterococcus faecium* in a sample or clinical specimen.

Inventions 660-736: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and characterisation of *Proteus mirabilis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 706-775, 788, 830, 863, 883, 890, 892, 940 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Proteus mirabilis* in a sample or in a clinical specimen.

A kit for the detection of *Proteus mirabilis* in a sample or clinical specimen.

Inventions 737-749: claims 1-4, 6, 11-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Proteus vulgaris* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 776-784, 819, 823, 893, 941 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Proteus vulgaris* in a sample or in a clinical specimen.

A kit for the detection of *Proteus vulgaris* in a sample or clinical specimen.

Inventions 750-835: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Candida albicans* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 231-307, 910-918 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Candida albicans* in a sample or in a clinical specimen.

A kit for the detection of *Candida albicans* in a sample or clinical specimen.

Inventions 836-864: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Acinetobacter baumannii* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2843-2863, 2865, 2866, 2868-2870, 2888, 2907, 2908 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Acinetobacter baumannii* in a sample or in a clinical specimen.

A kit for the detection of *Acinetobacter baumannii* in a sample or clinical specimen.

Inventions 865-883: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus viridans* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 687-705 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus viridans* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus viridans* in a sample or clinical specimen.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Invention 884: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of *Salmonella typhimurium* in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 795 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Salmonella typhimurium* in a sample or in a clinical specimen.

A kit for the detection of *Salmonella typhimurium* in a sample or clinical specimen.

Invention 885: claims 1-4, 8, 10-13, 15-25 (partially)

An analytical device for direct identification and characterisation of *Enterococcus flavescens* in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 881 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Enterococcus flavescens* in a sample or in a clinical specimen.

A kit for the detection of *Enterococcus flavescens* in a sample or clinical specimen.

Inventions 886-887: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus hominis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 937, 2906 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus hominis* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus hominis* in a sample.

Inventions 888-889: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Stenotrophomonas maltophilia* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2871, 2875, 2889-2901 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Stenotrophomonas maltophilia* in a sample or in a clinical specimen.

A kit for the detection of *Stenotrophomonas maltophilia* in a sample or clinical specimen.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/010132

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
EP 1310569	A	14-05-2003	CA 2411537 A1 JP 2003144153 A US 2003091991 A1	09-05-2003 20-05-2003 15-05-2003
WO 9207096	A	30-04-1992	AT 161893 T DE 69128639 D1 DE 69128639 T2 DK 554355 T3 EP 0554355 A1 ES 2112868 T3 GR 3026488 T3 HK 1005488 A1 JP 6502305 T	15-01-1998 12-02-1998 23-04-1998 11-05-1998 11-08-1993 16-04-1998 31-07-1998 08-01-1999 17-03-1994
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(54) Title: DNA MICROARRAY FOR RAPID IDENTIFICATION OF CANDIDA ALBICANS IN BLOOD CULTURES

(57) Abstract: DNA microarray for rapid identification of candida albicans in blood cultures.

REVISED
VERSION

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, MEDLINE, PAJ, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NAKAMURA M ET AL: "DEVELOPMENT OF THE DNA MICRO ARRAY FOR IDENTIFICATION OF INFECTIOUS DISEASE CAUSACTIVE BACTERIA IN HUMAN" 18 May 2003 (2003-05-18), ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, THE SOCIETY, WASHINGTON, DC, US, PAGE(S) ABSTRNOC219 , XP008047725 ISSN: 1060-2011 abstract ----- -/--	1-8, 10-25

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WANG R-F ET AL: "DNA microarray analysis of predominant human intestinal bacteria in fecal samples" August 2004 (2004-08), MOLECULAR AND CELLULAR PROBES, ACADEMIC PRESS, LONDON, GB, PAGE(S) 223-234 , XP004522575 ISSN: 0890-8508 abstract; tables 1,2</p>	1-8, 10-25
A	<p>LEHNER A ET AL: "Oligonucleotide microarray for identification of Enterococcus species" 1 May 2005 (2005-05-01), FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, PAGE(S) 133-142 , XP004876200 ISSN: 0378-1097 abstract</p>	1-8, 10-25
X	<p>EP 1 310 569 A (PRESIDENT OF GIFU UNIVERSITY) 14 May 2003 (2003-05-14) claim 14</p>	1-6, 10-13, 15,19-25
X	<p>WO 92/07096 A (MICROPROBE CORPORATION) 30 April 1992 (1992-04-30) page 12, paragraph 2 page 27, paragraph 2 example 6</p>	1-6,10, 12,13
X	<p>US 6 747 137 B1 (WEINSTOCK KEITH G [US] ET AL) 8 June 2004 (2004-06-08) column 2, lines 41-47 column 16, lines 55-60 column 19, lines 43-61 column 42, lines 5-43 table 2 claim 7</p>	1-6,10, 12,13, 19-25
X	<p>EP 1 344 833 A (CHIP BIOTECHNOLOGY INC DR [TW]) 17 September 2003 (2003-09-17)</p>	1-6, 10-13, 15,16, 18-25 7,14,17
Y	<p>page 2, paragraphs 8,10 page 3, paragraphs 13,18,19 examples 1,2 claim 8</p>	
Y	<p>US 6 008 341 A1 (FOSTER TIMOTHY JAMES [IE] ET AL) 28 December 1999 (1999-12-28) figure 2</p>	7,14,17
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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094868 A (CHIRON SPA [IT]; MASIGNANI VEGA [IT]; MORA MARIROSA [IT]; SCARSELLI MA) 28 November 2002 (2002-11-28) page 2, lines 12,13 page 2, lines 20-25 sequences 1992,3983 -----	1-8, 10-15

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2006/010132

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
1-4 (totally), 5-8, 10-18 (partially), 19-25
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-7 and 10-25 (partially)

An analytical device for direct identification and characterisation of microorganisms in a sample or clinical specimen, wherein the device comprises species specific gene probes of at least 100 nucleotides, and in particular a device for Staphylococcus species identification, in particular for S. aureus identification, wherein, in this case, the microarray comprises the gene probe listed as SEQ ID N° 3 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.

A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 2-176: claims 1-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus aureus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° SEQ ID N° 1-2, 4-141, 790, 798, 801, 802, 808, 812, 814, 818, 825, 827, 837, 840, 843, 844, 846, 848-852, 854, 855, 859, 862, 875, 885, 896, 897, 904, 907, 908, 935, 942, 2902, 2903, and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.

A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 177-220: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of E. coli in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 142-173, 815, 833, 834, 836, 839, 857, 860, 886-887, 895, 901, 906, and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of E. coli in a sample or in a clinical specimen.

Inventions 221-258: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Staphylococcus epidermis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 174-208, 786, 806, 826 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus epidermis* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus epidermis* in a sample or clinical specimen.

Inventions 259-269: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus haemolyticus* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 209-215, 796, 803, 820, 938 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus haemolyticus* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus haemolyticus* in a sample or clinical specimen.

Inventions 270-276: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus lugdunensis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 216-221, 888 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus lugdunensis* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus lugdunensis* in a sample or clinical specimen.

Inventions 277-284: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Staphylococcus warneri* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 224-230, 831 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus warneri* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus warneri* in a sample or clinical specimen.

Inventions 285-286: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus saprophyticus* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 222-223 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus saprophyticus* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus saprophyticus* in a sample or clinical specimen.

Inventions 287-375: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus pneumoniae* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 523-605, 793, 805, 807, 813, 858, 929 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus pneumoniae* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus pneumoniae* in a sample or clinical specimen.

Inventions 376-420: claims 1-4, 6, 11-12, 14-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Streptococcus pyogenes* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 645-686, 800, 856, 928 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus pyogenes* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus pyogenes* in a sample or clinical specimen.

Inventions 421-477: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Klebsiella pneumoniae* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 399-448, 792, 794, 829, 899, 902, 903, 934 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Klebsiella pneumoniae* in a sample or in a clinical specimen.

A kit for the detection of *Klebsiella pneumoniae* in a sample or clinical specimen.

Inventions 478-504: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Klebsiella oxytoca* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 449-469, 789, 799, 816, 822, 898, 943 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Klebsiella oxytoca* in a sample or in a clinical specimen.

A kit for the detection of *Klebsiella oxytoca* in a sample or clinical specimen.

Inventions 505-571: claims 1-4, 6, 11-12, 13-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Pseudomonas aeruginosa* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 470-522, 785, 787, 791, 797, 804, 821, 832, 838, 841, 842, 884, 889, 905, 926 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Pseudomonas aeruginosa* in a sample or in a clinical specimen.

A kit for the detection of *Pseudomonas aeruginosa* in a sample or clinical specimen.

Inventions 572-611: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus agalactiae* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 606-644, 930 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus agalactiae* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus agalactiae* in a sample or clinical specimen.

Invention 612: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus mutans* in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 894 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus mutans* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus mutans* in a sample or clinical specimen.

Inventions 613-633: claims 1-4, 6, 8, 10-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Enterococcus faecalis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 308-398, 809, 811, 835, 864, 865, 880, 891, 909, 933, 936 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Enterococcus faecalis* in a sample or in a clinical specimen.

A kit for the detection of *Enterococcus faecalis* in a sample or clinical specimen.

Inventions 634-659: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and characterisation of *Enterococcus faecium* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 810, 817, 824, 847, 853, 861, 866-874, 876-879, 882, 900, 927, 931, 932, 939, 2887 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Enterococcus faecium* in a sample or in a clinical specimen.

A kit for the detection of *Enterococcus faecium* in a sample or clinical specimen.

Inventions 660-736: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and characterisation of *Proteus mirabilis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 706-775, 788, 830, 863, 883, 890, 892, 940 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Proteus mirabilis* in a sample or in a clinical specimen.

A kit for the detection of *Proteus mirabilis* in a sample or clinical specimen.

Inventions 737-749: claims 1-4, 6, 11-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Proteus vulgaris* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 776-784, 819, 823, 893, 941 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Proteus vulgaris* in a sample or in a clinical specimen.

A kit for the detection of *Proteus vulgaris* in a sample or clinical specimen.

Inventions 750-835: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of *Candida albicans* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 231-307, 910-918 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Candida albicans* in a sample or in a clinical specimen.

A kit for the detection of *Candida albicans* in a sample or clinical specimen.

Inventions 836-864: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of *Acinetobacter baumannii* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2843-2863, 2865, 2866, 2868-2870, 2888, 2907, 2908 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Acinetobacter baumannii* in a sample or in a clinical specimen.

A kit for the detection of *Acinetobacter baumannii* in a sample or clinical specimen.

Inventions 865-883: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of *Streptococcus viridans* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 687-705 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Streptococcus viridans* in a sample or in a clinical specimen.

A kit for the detection of *Streptococcus viridans* in a sample or clinical specimen.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Invention 884: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of *Salmonella typhimurium* in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 795 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Salmonella typhimurium* in a sample or in a clinical specimen.

A kit for the detection of *Salmonella typhimurium* in a sample or clinical specimen.

Invention 885: claims 1-4, 8, 10-13, 15-25 (partially)

An analytical device for direct identification and characterisation of *Enterococcus flavescens* in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 881 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Enterococcus flavescens* in a sample or in a clinical specimen.

A kit for the detection of *Enterococcus flavescens* in a sample or clinical specimen.

Inventions 886-887: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of *Staphylococcus hominis* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 937, 2906 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Staphylococcus hominis* in a sample or in a clinical specimen.

A kit for the detection of *Staphylococcus hominis* in a sample.

Inventions 888-889: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of Dictyostelium discoideum in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 945, 947 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Dictyostelium discoideum in a sample or in a clinical specimen.

A kit for the detection of Dictyostelium discoideum in a sample or clinical specimen.

Inventions 890-892: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus dysgalactiae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2842, 2904, 2905 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Streptococcus dysgalactiae in a sample or in a clinical specimen.

A kit for the detection of Streptococcus dysgalactiae in a sample or clinical specimen.

Inventions 893-907: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and characterisation of Enterobacter cloacae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2864, 2967, 2872-2874, 2876-2886 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of Enterobacter cloacae in a sample or in a clinical specimen.

A kit for the detection of Enterobacter cloacae in a sample or clinical specimen.

Inventions 908-922: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An analytical device for direct identification and characterisation of *Stenotrophomonas maltophilia* in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 2871, 2875, 2889-2901 and having a length of at least 100 nucleotides.

Use of the analytical device.

An in vitro method for identification and characterisation of *Stenotrophomonas maltophilia* in a sample or in a clinical specimen.

A kit for the detection of *Stenotrophomonas maltophilia* in a sample or clinical specimen.

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